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ABSTRACT

The report details information on a study of effective inservice programs in the area of learning disabilities (LD) in Calgary, Alberta, Canada. Section 1 describes the content of the 28 Learning Centre inservice programs which were attended by 739 educators. Compilation of participant evaluations revealed a diverse list of recommendations for future inservice. Section 2 reviews literature about the knowledge, skills and competencies needed by teachers of students with LD, both regular and special class teachers. Competencies for special class teachers touch on such topic areas as written expression and spelling, oral language, reading, and mathematics. The final section details results of a needs assessment questionnaire completed by 397 teachers in two districts. The needs assessment examined background and identification information, preferences for scheduling and planning of inservice programs, and teachers' self ratings of competence in terms of general information about LD, assessment, and instruction/remediation. (CL)

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Inservice Evaluation Project

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Under contract to Alberta Education, Edmonton, Alberta

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Please Note

The views and recommendations expressed in this report are those of the researchers and not necessarily those of the Department of Education.

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Abstract

Inservice education in the area of learning disabilities is essential. The field is new and rapidly changing: limited courses are available at universities across Canada and many teachers lack training. Effective inservice requires careful selection of content and planning in response to assessed needs. The present project was undertaken to gather information to contribute to designing effective inservice programs to meet the needs of teachers in different contexts. Feedback from participants in inservice programs offered by the Learning Centre indicated that both regular and special education personnel are committed to advancing their knowledge about learning disabilities through inservice training but they do have diverse interests. A literature review indicated that there is professional concensus on the knowledge, skills and competencies needed for effective instruction of learning disabled students, but these skills and competencies lack empirical validation. The available information suggests that teachers' needs may vary across regular and special education and across grade levels.

The important topics in learning disabilities derived from inservice feedback and the literature review were included in a Learning Disabilities: Needs Assessment Survey distributed to samples of regular and special education personnel across grade levels of two urban school systems (1010 personnel). The return rate was 39% (397 surveys); 45% were regular class teachers; 46% were special education personnel; and 9% were miscellaneous special services personnel. The results of the survey supported the need for inservice training because few regular education teachers have preservice or inservice training in learning disabilities, and special education personnel acquired much of their training through inservice. Teachers were consistent in their preferences for the planning and delivery of inservice programs (e.g., half to full day workshops held during the school day and early in the school year, with teacher input in the planning, and incentives such as release time and payment of fees). Teachers' self-ratings of competence in general information, assessment and instruction/remediation of learning disabilities indicated that special education personnel felt more competent than regular class teachers. Junior high and high school regular class teachers reported lack of confidence in their competence and training in most topic areas surveyed. While special education teachers felt competent overall, junior high and high school educators identified several areas of weakness. Teachers did not consistently select areas of self-perceived weakness as priorities for inservice training. Preferences for inservice topics varied across grade levels and regular and special education. However, there was consistently high interest in learning strategies, problem-solving/thinking and assessment of attention problems, and considerable interest in memory, methods of identification, and screening procedures.

The results of the study provided evidence that more opportunities for preservice and inservice training in learning disabilities are essential particularly for regular educators; identified important considerations for the planning and delivery of inservice programs; and, provided guidelines for selecting inservice content to meet self-perceived areas of weakness and interests of teachers in varying contexts, i.e., regular versus special education; elementary versus junior high versus senior high school.

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Introduction

The Learning Centre, a non-profit organization operated by the Calgary Society for Students with Learning Difficulties, opened in 1979 with the primary goal of improving services to students with learning difficulties. Each aspect of the Learning Centre's three-fold mandate--Research, Client Services, Professional Development -- touches upon improving the effectiveness of teachers of learning disabled students in the belief that it is through the providers of services for students with learning difficulties that change and improvement will result.

The Professional Development activities of the Learning Centre include extensive inservice training for educators of learning disabled students including regular class teachers, special education teachers and resource personnel. Inservice education is recognized as essential in the field of education where college training represents the minimum prerequisite for entry into the teaching profession (Korinek, Schmid & McAdams, 1985). Entry level skills and knowledge are developed over time, with experience and with inservice training. Factors contributing to the need for an ongoing program of professional development include the current knowledge explosion, the rapid rate of technological change and the expanding role of educational institutions in modern society (Pansegrau, 1984).

The need for ongoing inservice education regarding learning disabilities is particularly important. The field of learning disabilities is relatively new and rapidly changing. In a review of special education in Canada, Bunch (1984) noted that few classes existed for teaching learning disabled students prior to 1970. Limited undergraduate and graduate programs in learning disabilities were available at universities across Canada. Although research and awareness about learning disabilities have increased dramatically in the past decade, Bunch (1984) argues that few changes have occurred in teacher training programs.

The importance of providing educators in Calgary and Southern Alberta with access to current information about learning disabilities is supported by Bunch's (1984) observations together with information gathered in the Calgary area. A survey of regular class teachers in the two Calgary school boards indicated that the majority of professional personnel employed in school-based positions lacked training in the area of learning disabilities with 66% of respondents reporting no training in learning disabilities (Hiebert, 1984). An evaluation of a sample of programs for learning disabled students in the Calgary Board of Education noted that there is little consistency in the training and preparation of teachers of the learning disabled (Alberta Education, 1985).

Many teachers rely on inservice training to gain knowledge about learning disabilities. The Learning Centre receives requests to provide professional development opportunities in learning disabilities for special education teachers, regular class teachers and resource personnel. In addition, weekend workshops, courses and conferences organized by the Learning Centre are filled to capacity attesting to the committment of educators to gaining knowledge and strategies in the area of learning disabilities.

Effective inservice programs in learning disabilities are needed. Reviews examining best practices in inservice education consistently identify the importance of planning inservice in response to assessed needs regarding content and delivery procedures (Hutson, 1981; Korinek, Schmid, & McAdams, 1985; Wilen & Kindsvatter, 1978). It is important to respond to local concerns (Parish & Arends, 1983), and to differentiate the needs of each teacher based on varying levels of experience in a particular area (Neil, 1985). In focusing on inservice needs in the area of learning disabilities, it is important to permit differentiation of interests and of self-perceived training and competence expressed by regular school personnel and special educators (McGinty & Keogh, 1975).

The purpose of the present project was to gather information to contribute to designing effective inservice programs in the area of learning disabilities to meet the needs of educators in different contexts, such as regular versus special education, or elementary grades versus junior high or senior high. The information was derived from three major sources: 1) feedback from participants in inservice presentations offered by the Learning Centre; 2) content of inservice suggested by a survey of the literature relevant to determining the knowledge, skills and competencies required for effective teaching of learning disabled students; 3) a needs assessment survey assessing procedural preferences, areas of interest for inservice programs in learning disabilities and areas of self-perceived weakness in the area of learning disabilities as indicated by teachers' self-ratings of competence.

The information gathered will be presented in three sections. In the first section, Learning Centre inservice programs are examined to determine the extent of the need for inservice programs in learning disabilities, the characteristics of participants in these inservice programs, and the inservice topics they identify as areas of interest or need. In the second section, literature is reviewed to determine the recommended content for inservice programs in learning disabilities based on the knowledge, skills and competencies which appear to contribute to the effective training of students with learning disabilities. Information derived from the feedback from inservice participants and from the literature review provided a basis for the content of a Needs Assessment Survey described in the third section. The survey tapped the self-perceived competence of educators in areas relevant to teaching students with learning disabilities. The survey also tapped areas of interest for inservice training and information regarding preferences for the delivery of inservice programs.

Learning Centre Inservice Programs

Between September of 1985 and March 31, 1986, Learning Centre staff offered a wide range of professional development opportunities to persons involved in the education of students with learning disabilities. Several presentation formats were offered. Table 1 presents course/workshop titles, the number of hours of instruction, and the number of participants in inservice courses for university credit offered in person and via teleconference, and in in-depth training courses and workshops presenting specialized teaching and assessment approaches. Most of the inservice programs described in Table 1 were arranged by the Learning Centre outside of school hours. Participation was voluntary. Participants included regular and special class teachers, resource teachers, special services personnel, administrators, psychologists, counsellors, and other interested professionals.

The courses required substantial time commitment, and yet 325 educators in Southern Alberta made the commitment to avail themselves of these opportunities to extend their knowledge to benefit students with learning difficulties. The positive response to these courses provides evidence that educators perceive the need to extend their knowledge in the area of learning disabilities and take the initiative to do so.

Table 1

Inservice Presentations Initiated by the Learning Centre Between September, 1985, and March 31, 1986

Type of Inservice	Number of Hours of Instruction	Number of Participants
University Course Credit		
EDIS 549.19 Learning Disabilities in the Classroom	15	21
EDIS 549.27 Selected Topics in the Understanding of Learning Disabilities		
Fall Teleconference	20	44
Winter Teleconference	20	40
Specialized Training Workshops		
Instrumental Enrichment Level I	40	25
Instrumental Enrichment Level II	40	4
Learning Potential Assessment Device (LPAD)		
Fall	40	6
Winter	40	20
Spring	40	35
Cognitive Behavioral Techniques for Treating Impulsive Children	12	104
Metacognition: A Key Ingredient in the Reading/Writing Process	5	26
TOTAL	272	325

In addition to inservice programs initiated by the Learning Centre, presentations were made at the invitation of regular and special education personnel at the school level, for groups of schools, and for school systems in the urban area and rural districts. Presentations varied in length from one/two hours, to half day to full day.

As can be seen from Table 2, Learning Centre staff offered 28 inservice presentations within the surrounding urban area and six presentations in other districts. A total of 737 educators participated in the 80 hours of inservice instruction. Eight requests involved general strategies for teaching students with learning disabilities, particularly strategies applicable in the regular class. Three requests involved issues in behavior management. Six presentations considered program planning for students with learning disabilities. Descriptions of specific programs and approaches were requested nine times (e.g., Instrumental Enrichment, Communication and Social Skills). Other topics included attention problems, assessing the readability of material, learning strategies and current research in learning disabilities. The volume of requests provides further evidence that information about learning disabilities is a priority item for inservice programs in Southern Alberta.

Learning Centre staff routinely ask inservice participants to complete an Evaluation Form (Appendix 1). Descriptive information, presented in Table 3, and suggestions for future inservices, presented in Table 4, were compiled for 19 presentations offered between September of 1984 and December of 1985. Eleven presentations were half days, 7 were full days and one was two hours. Three hundred and ninety-seven of

Table 2

Learning Centre Inservice Presentations by Invitation
Between September, 1985 and March 31, 1986

Location	Number of Presentations	Number of hrs of instruction	Number of Participants
Within the urban area			
Full Day (6 hours)	3	18	75
Half Day (3 hours)	11	33	309
One/two hours	8	8	153
TOTAL	22	59	537
Outside the urban area			
Full Day (6 hours)	1	6	50
Half Day (3 hours)	5	15	152
TOTAL	6	21	202

Table 3

Descriptive Information for Participants in Learning Centre Inservice Programs (September, 1984 - December, 1985)

	N	Frequency	Percent
Age Range			
18-20 years	382	2	(.5)
21-30 years		126	33
31-40 years		151	40
41-50 years		74	19
51-60 years		15	4
61-70 years		14	4
Present Occupation			
Classroom Teacher	362	130	36
Special Education			
-unspecified		34	9
-LD teacher		13	4
-Resource Room		51	14
-Compensatory		22	6
Resource Personnel		13	4
Counsellors		26	7
ESL Teachers		2	(.5)
ECS Teachers		8	2
Teacher Intern		2	(.5)
Administrator		12	3
University Student		29	8
Child Care Worker		9	2
Undetermined		11	3
Years in Present Occupation			
1 year	352	9	3
1-2 years		71	20
3-5 years		106	30
6-10 years		91	26
11-15 years		43	12
more than 15 years		32	9

Table 4

Suggestions for Future Inservice Presentations made by Participants in Learning Centre Presentations (September, 1984 - December, 1985)

Instructional Strategies for Teaching LD Students

- In-depth presentations in content areas
  - language arts
  - mathematics
  - science
- Specific strategies for reading, spelling, dictionary skills, study strategies
- Application of cognitive strategies in the classroom
- Curriculum planning
- Program differentiation for LD students in the regular classroom
- Adolescents: writing skills, survival skills

Assessment

- Many requests for demonstrations of new and/or frequently used assessment instruments
- Diagnostic testing for individual program planning/interpreting test data (formal and informal) and making program recommendations

Specific Topics

- Cognitive Behavior Management
- Instrumental Enrichment
- Self-esteem
- Social Deficits
- Attention Deficits
- Attention Problems
- Language Remediation
- Use of computers with LD students
- Learning styles

Topics for Particular Target Groups

- Language Arts Teachers
- Math teachers
- Counsellor (learning strategies, organizational skills)
- Principals

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the 513 participants completed the Evaluation Form for a return rate of 77%. As can be seen from Table 3, the majority of respondents (73%) were between 21 and 40 years of age. Twenty-three percent were very early in their careers, that is, one to two years, when concerns about self and feelings of inadequacy may be present along with concerns about teaching impact (Reeves & Kazelskis, 1985). Fifty-three percent had been in their present occupation for three to 10 years when concerns about teaching impact are high (Reeves & Kazelskis, 1985). The two largest groups represented were classroom teachers (36%) and special education personnel (33%) suggesting that regular class teachers are as committed to increasing their knowledge about learning disabilities as are special education personnel. Counsellors (7%) also sought further training to assist in meeting the needs of students with learning disabilities. The participation by university students (8%) suggests that they perceive a need to supplement the information about learning disabilities available in their university courses.

The participants suggested many topics they would like to see included in future inservice presentations (see Table 4). The diversity of topics included instructional strategies, assessment approaches, specific programs and problem areas and content of particular interest to specialized target groups (e.g., Math teachers). The wide range of content suggested and the diverse teaching roles of the inservice participants further indicated that a systematic assessment of the needs of identified groups of educators was required to plan more effective inservice programs. As a basis for developing a survey to assess these needs, a review of the literature was undertaken to identify the areas most relevant to the effective teaching of learning disabled students.

Literature Review: Knowledge, Skills and Competencies Needed by Teachers of Students with Learning Disabilities

As one approach to selecting content and specifying objectives of inservice programs in learning disabilities, relevant literature and research were reviewed to determine the essential knowledge, skills and competencies required for effective teaching of learning disabled students.

Method of Review

Several approaches were adopted to yield a comprehensive review of relevant literature. A computer search (ERIC) was conducted using suitable descriptors, namely, learning disabilities, teacher competencies, teacher effectiveness. In addition, manual searches were made for the years 1980 through 1986 in the indexes of *Exceptional Children*, *Exceptional Education Quarterly*, *Journal of Learning Disabilities*, *Topics in Learning and Learning Disabilities*, *Remedial and Special Education*, *Teacher Education and Special Education* (1982 and 1984), *Teaching Exceptional Children*, *Special Education in Canada*. Relevant textbooks were examined for reference to knowledge, skills and competencies appropriate for educators of learning disabled students.

Knowledge, Skills and Competencies

The review of literature highlighted two areas of need: a) knowledge, skills and competencies needed by special education teachers of learning disabled students; and b) knowledge, skills and competencies needed by regular class teachers of LD students. These two areas are presented separately.

A) Special Education Teachers of LD students

In the area of learning disabilities, a comprehensive document was set forth in 1978 in the United States by the Division for Children with Learning Disabilities (DCLD) which may be viewed as encompassing what LD professionals are supposed to know, or be able to do. The document, Competencies for Teachers of Learning Disabled Youth (Newcomer, 1978) itemizes eleven major areas of competence: oral language, reading, written expression, spelling, mathematics, cognition, behavioral management, counselling and consulting, career/vocational education, educational operations and historical-theoretical perspectives. Within eight of these areas, competencies in general knowledge, assessment and instruction were described. The validity of the competencies was based upon professional concensus and represented the prevalent opinions current at that time. The competency statements were seen as guidelines to be modified and altered as changes occurred in the field of learning disabilities and as empirical data were gathered regarding the validity of the competencies described.

Newcomer (1978) outlined four possible uses of the competency statements:

1) to provide guidelines for the development or modification of teacher training programs,
2) to establish certification standards for professionals in learning disabilities,
3) to serve as criteria for employment,
4) to provide standards for monitoring ongoing professional practices.

The fourth use is of primary interest here as the competency statements may influence the content of inservice training (Leigh, 1980). To determine the appropriate content for inservice training planned for teachers in a school, one may consider existing competencies and perceived needed competencies (Chalfant, Pysh & Moultrie, 1979).

The eleven areas of competence outlined in the DCLD document are used as guidelines in organizing literature relevant to determining knowledge, skills and competencies needed by special education teachers of learning disabled students.

Oral Language. There is professional concensus that teachers of LD students need general information and competency in the assessment and instruction of oral language (DCLD, 1978). Information about oral language is included in textbooks and considerable research emphasizes the oral language difficulties of LD students (e.g., Donahue, 1984; Dudley-Marling, 1985; Wiig, 1984).

Local education agency administrators (USA) rated competency in language remediation and development as desirable in preparation programs for secondary special education teachers; fewer college/university administrators rated language remediation as important (Miller, Sabatino, & Larsen, 1980).

LD professionals rated competencies in the area of oral language as important for being able to function at maximum efficiency in their occupations, but some professionals did not believe that they were fully competent in this area (Freeman & Becker, 1979; Newcomer, 1982). Thus, knowledge about oral language is important for LD teachers, but may not be emphasized in college/university preparation of secondary special education teachers, and practising professionals may not feel competent in this area.

Reading. DCLD (1978) competency statements included general knowledge about developmental, corrective and remedial reading; assessment of reading for screening, evaluation, diagnosis, and ongoing monitoring; and corrective and remedial instruction in reading. Professional concensus about the importance of reading for teachers of LD students is further supported by the extensive emphasis given to reading in relevant textbooks. Difficulty with reading is one of the most critical problems facing a significant number of LD children (Reid & Hresko, 1981).

The importance of competencies in the area of reading is evident in surveys of practicising LD teachers. Freeman & Becker (1979) and Newcomer (1982) reported that LD professionals rated reading as the most important competency area and felt most proficient in reading skills. Junior and senior high school resource teachers reported spending the most time remediating basic skills (including reading) and ranked this activity as their most important teaching role (Wells, Schmid, Algozzine & Maher, 1983).

Professional concensus about the importance of competencies in the area of reading is supported by empirical data which points to the relationship between reading instruction and achievement of LD students. For example, active academic responding time spent in oral reading is positively correlated with achievement scores for grade 3 and 4 LD students (Thurlow, Graden, et al. 1983; Thurlow, Ysseldyke et al., 1984).

Even though there is wide support for the importance of competence in the area of reading for LD professionals working at all grade levels, LD teachers at the secondary level may not have adequate opportunities to develop competence. Remedial reading was rated as desirable in preparation programs for secondary special education teachers by fewer than half of college/university administrators and special education directors surveyed in the USA (48.6% and 37.6%, respectively) (Miller et al., 1980).

Written Expression and Spelling. Competence in general knowledge, assessment, and instruction in written expression and in spelling are included in the DCLD (1978) statements. Textbooks for LD professionals include information about both of these areas.

LD professionals rated competencies in written expression and spelling as important for being able to function at maximum efficiency in their roles. However, in contrast to self-reported competence in reading and spelling some professionals did not believe they were fully competent in the area of written expression (Freeman and Becker, 1979; Newcomer, 1982).

Junior and senior high school resource teachers reported spending the most time in remediating basic skills (including written expression and spelling) and ranked this activity as their most important teaching role (Wells et al., 1983).

As was found for reading, active academic responding time spent in writing is positively correlated with achievement scores of grade 3 and 4 LD students (Thurlow, Graden et al., 1983; Thurlow, Ysseldyke et al., 1984).

Mathematics. Professional concensus (DCLD statements and textbooks) supports competence in mathematics as important for the effective teaching of LD students.

Junior and senior high school resource teachers included mathematics as one of the basic areas which they spend time remediating (Wells et al., 1983). Carpenter (1985) reported that elementary and secondary students in resource rooms spend an average of one-third of the allocated time in mathematics instruction indicating that mathematics is an important area of content instruction for resource room teachers.

Considerable evidence suggests that while competence in mathematics is viewed as important, teachers of LD students may not feel adequately trained in this area. LD professionals rated competencies in the area of mathematics as important for being able to function at maximum efficiency, but some professionals did not believe they were fully competent in this area (Freeman & Becker, 1979; Newcomer, 1982). Fitzmaurice (1980) reported that teachers of LD students perceived themselves as weak in certain areas of mathematics content, assessment and methodology (self-ratings on DCLD mathematics competencies). There was no correlation between the number of university credits earned in mathematics courses and the number of areas in which teachers felt confident. In another study (Carpenter, 1985), elementary and secondary resource teachers did not rate all of the DCLD mathematics competency statements as important to their current teaching activities, and the two groups did not consider all competencies equally important. Ratings of self-perceived competence indicated that there were areas rated as important in which teachers did not feel confident (e.g. use of scope and sequence charts in assessment).

Cognition. The DCLD (1978) document includes the area of cognition with competency statements including general knowledge, assessment and instruction topics. However, LD professionals did not rate competence in the area of cognition as particularly important for being able to function at maximum efficiency (Newcomer, 1982). In addition, textbooks do not always include extensive information on cognition. Many current texts do include information on the problem-solving skills, learning strategies and metacognition which appear to be highly important in teaching LD students in light of recent research emphasizing the strategy deficits of LD students (e.g., Deshler, Warner, Schumaker, & Alley, 1983; Gearheart, De Ruiter, & Sileo, 1986; Reid & Hresko, 1981; Torgesen & Kicht, 1983).

Behavioral Management. Competence in addressing social/affective factors and classroom behavior problems are seen as important in the effective management of LD students (DCLD, 1978). Interpersonal communication skills training for resource teachers has been shown to be related to gains in student achievement suggesting that affective variables are important to teachers' overall effectiveness (Robinson & Brosh, 1980).

Relevant textbooks include consideration of behavior management issues. Social and emotional issues are becoming more prevalent in textbooks, likely in recognition of growing concern about the social interaction problems experienced by many LD students (e.g., Bryan & Bryan, 1983). Social development, social adjustment, self-esteem, motivation and social skill training are considered to be important areas of classroom instruction by researchers, writers and teacher trainers (Wells et al., 1983).

Newcomer (1978) reported that LD "teachers are surprisingly unconvinced of the importance of competence in behavior management". However, other studies support the importance of behavior management competencies. LD professionals rated behavior management competencies as highly important (Freeman & Becker, 1979). Competencies in behavior management are considered important in the preparation of secondary special education teachers by approximately half of the college/university and education agency administrators surveyed in the USA (Miller et al., 1980).

Wells (1983) found that approximately one-fourth of the junior and senior high resource teachers surveyed rated developing appropriate behavior patterns and skills, and developing appropriate values and intact personality structure, as important aspects of their teaching role. However, these teachers reported that little of their time was spent in the following areas: modifying inappropriate behavior, developing appropriate values system, developing intact personality structure, and counselling (Wells et al., 1983).

Counselling and Consulting. The DCLD (1978) document included competency statements related to consulting with teachers and administrators, consulting and counselling with parents, consulting and counselling with children. LD professionals rated all of these areas as important for effective job performance (Newcomer, 1982). Freeman and Becker (1979) reported that LD professionals rated competencies in consulting with teachers and administrators as highly important.

The role of the resource teacher has undergone changes. Consultative services to other school personnel and parents are becoming an important aspect of the resource teacher's role (e.g., Wiederholt, Hammil, & Bacon, 1983). Resource teacher's perceptions of their responsibilities include consulting as an expected role (Brown, Kiraly & McKinnon, 1979). Resource teachers, regular class teachers, and principals indicated that consultation should be part of the resource teacher's role and resource teachers were judged to be moderately skilled in consultation (Friend, 1984). When compared with less effective teachers, the more effective special education teachers as judged by their supervisors, were extensively involved with other school personnel and with parents (Westling et al., 1981).

The emphasis on consultative services is not shared by all special educators. Junior and senior high resource teachers reported that they spend very little time consulting with general educators or counselling students. Few (11-13%) rated consultant services to central education staff as an important aspect of their teaching role. The lack of concern for working with general educators was viewed as disturbing by Wells et al. (1983) who stressed the prevailing view that the resource room concept implies a partnership between the general education and the special education teachers.

In view of the increasing emphasis on consultative services, it is of concern that resource teachers often feel inadequately prepared to function as consultants (Evans, 1981). Consequently, inservice training programs have been developed in this area. For example, Cohen and Safran (1981) described a training model for LD resource teachers which was developed in response to a perceived deficiency in training to carry out consultative functions.

Career/Vocational Education. Competency in career/vocational education is included in the DCLD (1978) statement. However, these issues are not always included in relevant textbooks, nor do LD professionals view career/vocational education as particularly important for being able to function at maximum efficiency (Newcomer, 1982).

This area becomes more important to secondary-level special educators even though career planning must begin early for LD students (Newcomer, 1978). Approximately half of university/college and education agency administrators surveyed in the USA considered competencies in career education as desirable in the training of secondary special educators (Miller et al., 1980). Career education is gaining emphasis as an important component of the high school education of LD students (Haight, 1985).

There may be a growing emphasis on career/vocational education for older LD students, but this information is not always included in programs for LD students. For example, junior and senior high resource teachers reported that virtually no time was spent in developing career and vocational skills. Only 11% of junior high teachers and 18% of senior high school teachers ranked developing career and vocational skills as an important role of resource teachers (Wells et al., 1983).

Educational Operations. Competencies included in this section of the DCLD (1978) statement involve assessment, materials, audio/visual, learning environment, and instruction. Most textbooks include information on these topics. LD professionals rated competency in assessment, learning environment, and instruction as important to their professional roles (Newcomer, 1982).

Professional concensus points to the importance of competence in assessment which may not always be evident in practice. Junior high and senior high school resource teachers reported that they spent little time in administering screening and diagnostic tests, and only one-fourth of the teachers surveyed viewed testing as an important role (Wells et al., 1983). Only half of the LD teachers surveyed by Wesson, King, and Deno (1984) used direct and frequent measurement even though this technique has been found to contribute to improved achievement. Compared to less effective special education teachers, more effective special education teachers (as judged by their supervisors) used pre-post evaluations of student performance (Westling et al., 1981).

Assessment is used extensively in the education of learning disabled students. However, Bennett and Shepherd (1982) demonstrated that LD specialists lacked proficiency in basic measurement concepts essential to competent assessment. On the average, the LD specialists correctly answered only half of a series of test questions tapping knowledge of measurement concepts.

Competencies in instruction as outlined in the DCLD statement provide general guidelines for effective instruction. The more effective special education teachers described by Westling et al (1981) provided more small group and individual instruction than less effective teachers. The more effective teachers also developed their own curriculum.

Although few studies have examined teacher effectiveness in special education, teacher effectiveness has been widely examined in the regular classroom. Yuzdepski and Elliot (1985) identified 19 variables that have been consistently related to student achievement. Of these variables, direct instruction characteristics, academic learning time and time on task have been investigated with LD students.

Englert (1983, 1984) examined direct instruction factors which affected LD students' achievement in tutoring sessions conducted by teacher trainees. LD students made greater gains when the teachers maintained a high presentation rate with many correct student responses, were more successful in managing student behavior, prompted rather than told correct answers following student errors, stated objectives, presented more examples, provided practice in problem areas and used pre-questioning.

Thurlow, Graden et al., (1983) and Thurlow, Ysseldyke et al., (1984) found that active academic responding time (not just listening) in reading aloud and writing were related to academic achievement gains made by grade 3 and 4 students.

Although academic responding time represents opportunity to learn and promotes success, several studies indicate that LD students are actively engaged in learning for a small proportion of the school day. LD students in five different service delivery models (in regular classes, in regular classes with individual help in class, in regular class with up to half a day in resource room, more than half day in resource room, full-time LD class placement) did not differ in opportunities to learn: 43 minutes/day (13% of school day) constituted academic responding time (Thurlow, Ysseldyke et al., 1984). In other studies, grade 3 and 4 LD students were observed to be engaged in academic responding for 29 minutes/day in the resource room and 19 minutes/day in the regular class (Thurlow, Graden et al., 1983; Thurlow, Ysseldyke et al., 1983a), for 40 minutes of a 60 minute reading lesson (Ysseldyke et al., 1984) and for 29 minutes of a 95 minute resource room lesson (Thurlow, Ysseldyke et al., 1983b). Miramontes, Cheng, and Trueber (1984) reported that LD students actually received little direct instruction in reading: during a one-and-one half hour reading class, only 23% of the class time was spent directly on reading.

While knowledge of the principles of assessment and effective instruction are thought to be important for LD professionals, assessment may not be a strength area in practice. The important variables contributing to effective instruction are not clear because there is a lack of research relevant to teacher effectiveness in special education. The available research identifies a few variables of effective teaching which may not be widely observed in practice.

Historical-Theoretical Perspectives. Competency statements included in the DCLD (1978) document involve the history of learning disabilities, program models, and professional organizations. This information is also common in relevant textbooks. However, LD professionals indicated that they had little interest in this information and it had little relevance to practice (Newcomer, 1982).

B) Regular Class Teachers of LD Students

The movement towards integration of LD students into regular classes has increased the need for regular class teachers to acquire the knowledge, skills, and competencies to promote the effective teaching of LD students in their classes. As yet, very little information is available in the literature to indicate what areas of competence are important for regular class teachers of LD students. A limited number of studies are noted below.

Professional concensus by Special Education State Directors in the USA generated a list of 11 competencies (skills, knowledge, attitudes) that teachers of integrated classes should possess (Monaco & Chappetta, 1978). The 11 competencies, ranked in order of importance from most to least important were: individualizes instruction, comprehends the abilities of handicapped and exceptional students, evaluates and diagnoses student's ability and progress, provides a humanly supportive environment, uses behavioral managment strategies, works cooperatively with adults in the school setting, utilizes the psychology of learning and instruction, evaluates the utility of various instructional strategies, interprets task analysis, evaluates the appropriateness of resources for program use, promotes the mainstream concept. Canadian special educators in Quebec ranked the importance of these 11 competencies in the Canadian context (Sokolyk, 1981). Among the highest ranked were: provides a humanly supportive environment, individualizes instruction, comprehends the abilities of handicapped and exceptional students, evaluates and diagnoses student's ability and progress.

Self-reports of perceived levels of competence of regular educators in California indicated a lack of background and knowledge about exceptional pupils and a particular need for inservice training to include the development of individualized instructional programs for exceptional pupils, to increase understanding of the social and affective aspects of integration, and issues of behavior management (McGinty & Keogh, 1975).

Skill in classroom management has been shown to be important in the effective teaching of LD and emotionally disturbed students in grades 3-6 regular classrooms (Borg & Ascione, 1982). The students taught by teachers trained in classroom management showed increased on-task behavior and decreased deviant behavior compared with students in control classrooms. The teacher behaviors reported to be related to positive student outcomes were: positive questioning techniques, alerting cues, peer involvement, non-academic specific praise, general praise and fewer teacher interruptions.

Powers (1983) suggested important content areas for inservice programs designed to provide regular class teachers with opportunities for developing the knowledge, skills and attitudes prerequisite to the effective integration of handicapped, including LD, students. He suggested that the teachers need information on instructional strategies, strategies for the individualization of instruction and how to translate contemporary research into classroom practice. Secondary teachers in particular may need training in: peer tutoring strategies, techniques for dealing with underachievers, modification of teaching strategies, questioning skills and assessment skills.

LD students may require special considerations in content area classes. Shake and Domaracki (1984) outlined several factors felt to be important. Communication between content area teachers, resource room teachers and reading teachers is essential. Content area teachers need to adapt instructional goals and plans and therefore need to be aware of the readability level of materials, the LD students' base of prior knowledge and appropriate evaluation techniques.

Summary

The review of the literature indicated that there is a dearth of empirical data identifying the knowledge, skills and competencies required by teachers of LD students. It appears that regular class teachers may need different competencies than special education personnel but little information is available to assist in describing what these teachers need to know to effectively instruct LD students in their regular classes. There are indications that regular class teachers lack confidence in their ability to teach LD students effectively (McGinty & Keogh, 1975).

Although much more attention has been devoted to identifying the competencies required by special education personnel, the competencies are derived from professional concensus. The ultimate test of the validity of specific teacher competencies is to show a relationship between their demonstration and gains in student achievement, but such studies are rare in special education.

The available data do suggest that many LD professionals lack confidence in their competence in several areas which they consider to be important in the effective educational management of LD students (e.g., oral language, written expression, mathematics, consulting). LD professionals at the elementary and secondary levels may differ in areas they perceive to be important and in their training (e.g., language remediation, reading, career/vocational). Some areas are not consistently emphasized in practice but are stressed by experts in learning disabilities, such as consulting, cognition (problem-solving, learning strategies, metacognition), behavior management, career/vocational education at young ages, and measurement issues in assessment.

The competencies explored in the review of the literature may be used as a basis for assessing the needs of local educators in different contexts: regular versus special education, and elementary versus junior high versus senior high. Self-perceived competence and identified areas of interest will help define and differentiate the inservice priorities of various target groups.

Learning Disabilities: Needs Assessment Survey

The feedback from participants in Learning Centre inservice presentations, and the literature reviewed, indicated the importance of determining local needs for inservice training in learning disabilities of regular and special education personnel at the elementary, junior high and high school levels. The Learning Disabilities Needs Assessment Survey (Appendix 2) permitted differentiation of interests and of self-perceived training and competence expressed by teachers varying in teaching roles and in experience in the area of learning disabilities. Nineteen general information topics, 11 assessment topics and 15 instruction/remediation topics were included in the survey.

These topics were derived from the DCLD (1978) statement of competencies, from topics specified in relevant textbooks, and from topics suggested by participants in Learning Centre inservice programs. The survey of content was combined with descriptive and procedural information to provide a basis for planning more effective inservice to meet better the needs of regular and special education personnel.

METHOD

The Learning Disabilities: Needs Assessment Survey contained three major sections: A) background and identification information including position, grade level, content areas taught, sex, age range, educational background, and training in the area of learning disabilities; B) questions on the planning and presentation of inservice training which tapped preferences for the scheduling of inservice, the personnel to be included in planning, the presentation format, and the reasons and incentives most likely to encourage attendance at an inservice training program; C) a section tapping teachers' self-ratings of competence in areas related to general information about learning disabilities, assessment, and instruction/remediation, and questions directed at determining the topics of most interest for an inservice program in learning disabilities.

A total of 1010 questionnaires were distributed to regular and special education class teachers across elementary, junior high and high school levels, and to selected special services personnel in two school systems in a large urban centre as follows:

A) School System A

- 10% random sample of all regular classsroom teachers generated by selecting every tenth name from a computerized alphabetical listing of professional staff excluding administrators and special education personnel (438 personnel);

- special education personnel including all teachers of classes for students with learning disabilities, all Resource Teachers and Program Specialists (330 personnel);

B) School System B

- 10% randon sample of all regular classroom teachers generated by selecting every tenth name from a computerized alphabetical listing of professional staff teaching in regular classrooms (193 personnel);

- Special education personnel including all Resource Room teachers, Remedial Language Arts teachers and Guidance Consultants (49 personnel).

The data were analyzed using the Statistical Package for Social Sciences (SPSS).

RESULTS AND DISCUSSION

The final return rate for the questionnaires was 293 for System A (38%) and 104 for System B (43%) for a total return rate of 39%.

Descriptive Information

A total of 180 regular class teachers comprising 45% of the total sample responded to the questionnaire. Descriptive information for the regular class teachers is presented in Table 5. One hundred and six regular class respondents were from System A (27% of the total sample) and 74 were from System B (19% of the total sample). As can be seen from Table 5, the respondents from the two school systems were similar in sex distribution, the age ranges represented and the years of teaching experience reported. The regular class teachers from the two school systems were combined for further analyses. The majority of these respondents were female (69%). Sixty-three percent taught at the elementary level (kindergarten to grade 6); 20% taught junior high (grades 7 to 9) and 15% taught senior high school (grades 10 to 12).

The majority of regular class teachers were under 50 years of age (85%) and had more than two years of teaching experience.

Table 5

Regular Class Teachers: Descriptive Information

	System A (n=106)		System B (n=56)		Total (n=180)	
	Frequency	%	Frequency	%	Frequency	%
Category: Grades Served						
Kindergarten - Grade 6	64	60	49	66	113	63
Grades 7 - 9	22	21	14	19	36	20
Grades 10 - 12	17	16	10	14	27	15
Unknown	3	3	1	1	4	2
Category: Sex						
Male	28	26	22	30	50	28
Female	74	70	51	69	125	69
Unknown	4	3	1	1	5	3
Category: Age Range						
21 - 30 Years	23	22	21	28	44	24
31 - 40	41	39	24	32	55	31
41 - 50	34	32	20	27	54	30
51 - 60	4	4	8	11	12	6
More than 60	1	1	0	0	1	.05
Unknown	3	2	1	1	4	2
Category: Years of Teaching Experience						
2 or less	4	4	1	1	5	3
3 to 7	33	31	22	30	55	31
8 to 15	36	34	23	31	59	33
16 or more	31	40	28	38	59	33
Unknown	2	1	0	0	2	1

Approximately equal distributions of respondents were observed across the age ranges of 21 to 30 years, 31 to 40 years and 41 to 50 years. Approximately one-third of the regular class teachers had three to seven years of teaching experience, another third reported eight to 15 years of experience and another third over 15 years.

Thus, the characteristics of the samples of regular class teachers who responded to the survey from the two shool systems were similar. Elementary grade teachers and women were most highly represented in the total sample. Respondents were fairly evenly distributed across age ranges and years of teaching experience with few respondents in the beginning years of their teaching career.

Descriptive information for special education personnel are presented in Table 6. Special education services are offered in different ways by the two school systems surveyed. In System A, approximately 115 special class teachers teach segregated classes for students with learning disabilities who are integrated into certain activities within regular classes according to individual capability and program; each school has a Resource teacher to assist regular classroom teachers to modify the curriculum for students with exceptional needs; Program Specialists assist Resource teachers and special class teachers in a group of schools. In System B, students with learning disabilites may receive assistance from a Resource Room teacher for up to 50% of the school day while registered in a regular class, or from a Remedial Language Arts teacher for 70% of the school day with integration where appropriate. Special Services Consultants assist teachers in meeting the needs of students with learning disabilities.

Table 6

Special Education Personnel: Descriptive Information

	System A				System B		Total	
	Resource		LD Class		Special Class			
	(n=107)		(n=56)		(n=19)		(n=182)	
	Freq	%	Freq	%	Freq	%	Freq	%
Category: Grades Served								
Kindergarten - Grade 6	61	57	35	63	14	72	110	60
Grades 7 - 9	34	32	16	29	3	17	53	29
Grades 10 - 12	9	8	4	7	2	11	15	8
Unknown	3	3	1	2	0	0	4	2
Category: Sex								
Male	21	20	7	13	4	22	32	18
Female	86	80	49	87	14	78	149	82
Unknown	0	0	0	0	0	0	0	0
Category: Age Range								
21 - 30 Years	10	9	23	41	2	11	35	19
31 - 40	52	49	22	39	9	50	83	46
41 - 50	39	36	9	16	4	22	52	29
51 - 60	4	4	2	4	2	11	8	4
More than 60	2	2	0	0	1	6	3	2
Unknown								
Category: Years of Teaching Experience								
2 or less	1	1	4	7	0	0	5	3
3 to 7	20	19	29	52	4	22	53	29
8 to 15	47	44	15	27	6	33	68	37
16 or more	39	36	8	14	8	44	55	30
Unknown	0	0	0	0	0	0	0	0

The descriptive information in Table 6 is presented for the special class teachers of the two systems combined, i.e., the Learning Disabilities class teachers of System A and the Resource Room and Remedial Language Arts class teachers of System B. Data for the Resource teachers of System A are presented separately as their role differs from that of special class teachers.

As can be seen from Table 6, the characteristics of the special education personnel were similar to those of the regular class teachers in terms of age distribution and the years of teaching experience. The grade levels served reflect the administrative structures in that the number of special classes decreases in junior high and in senior high school. Sixty percent of the special education personnel responding to the survey served the elementary grades, 29% served junior high and 8% served senior high.

Thirty-five of the respondents (9%) indicated that their current position was in "Special Services". A variety of special services were described. Eleven of these respondents were special education personnel, seven were counsellors, four were librarians and the remainder were specialists in the following areas: early childhood services, English as a second language, physical education, adult education, computers, work experience, vocational education and special projects. These personnel were included in the analyses of Section B data determining the mechanics of inservice delivery but were excluded from other analyses because their numbers were small and their diverse roles differed from those of the regular class teachers, special class teachers and Resource teachers.

Respondents indicated previous training received in the area of learning disabilities. As can be seen from Table 7, few regular class teachers at any grade level had training in the area of learning disabilities (28%). In contrast, 83% of special class teachers and 74% of Resource teachers reported having received training. Of the special education personnel, Resource teachers at the junior high level reported the least training in learning disabilities (62%). The lack of training in learning disabilities reported by regular class teachers is consistent with a previous report that 66% of regular class teachers had no training in learning disabilities (Hiebert, 1984).

Regular class teachers who had training in the area of learning disabilities had received this training in their undergraduate university program (22%), but few had pursued graduate training (3%) or inservice training (6%). In contrast, many special education personnel participated in inservice training in learning disabilities (54% of special class teachers and 65% of Resource teachers). Special class teachers and Resource teachers were similar in graduate training in learning disabilities (29% and 22%, respectively); however, more of the special class teachers reported undergraduate training (57% versus 21% of Resource teachers).

It is striking that little training in learning disabilities was received in undergraduate university training confirming Bunch's (1984) observations that Canadian universities offer limited courses and opportunities in this area. The importance of inservice programs is

Table 7

Training in the Area of Learning Disabilities

		Have Training		Under Grad		Graduate		Inservice	
	N	Freq	%	Freq	%	Freq	%	Freq	%
Regular Class Teachers[1]									
Grades K-6	113	31	27	24	21	3	3	9	8
Grades 7-9	36	12	33	10	28	2	5	0	0
Grades 10-12	27	6	22	5	19	1	4	2	7
Total	176	49	28	39	22	6	3	11	6
Special Education Personnel									
A. Special Class Teachers[2]									
Grades K-6	47	39	83	28	56	12	26	25	53
Grades 7-9	19	18	95	12	63	7	37	10	53
Grades 10-12	6	5	83	1	17	2	33	4	67
Total	72	62	86	41	57	21	29	39	54
B. Resource Teachers[3]									
Grades K-6	63	48	76	14	22	15	24	43	68
Grades 7-9	34	21	62	7	21	7	21	19	55
Grades 10-12	9	7	78	1	11	1	11	7	78
Total	106	78	74	22	21	23	22	69	65

[1] Includes regular class teachers from both System A and B.

[2] Includes Learning Disabilities class teachers from System A and Resource Room and Remedial Language Arts teachers from System B.

[3] Includes Resource teachers from System A.

clear. More than half of the special education personnel extended their knowledge of learning disabilities through inservice training pointing to the need for ongoing opportunities. In contrast, regular class teachers had few preservice or inservice opportunities for training in learning disabilities. It follows that inservice programs are an important, but neglected, vehicle for offering regular class teachers information about learning disabilities.

Only 30 respondents specified the inservice courses which had provided training in the area of learning disabilities. The types of inservice included specific inservices arranged for various special education personnel (70%), clinical reading and learning disabilities inservice courses offered through a university (17%), and conferences (13%).

Respondents were asked to indicate what they had found to be most helpful in preparing them to work with students with learning difficulties (See Table 8). As most regular class teachers had not had specialized preservice or inservice training in learning disabilities or special class experience, the majority (59%) indicated that regular class experience was the most helpful preparation.

On the whole, special class teachers indicated that special class experience was the most helpful form of preparation for them (65%). However, there were differences across grade levels with special class teachers at the high school level reporting that specialized inservice training (50%) and regular class experience (67%) were more helpful than special class experience (17%).

Table 8

Most Helpful Preparation for Working with Students with Learning Difficulties

		Specialized Preservice Training		Specialized Inservice Training		Regular Class Experiences		Special Class Experiences	
	N	Freq	%	Freq	%	Freq	%	Freq	%
Regular Class Teachers[1]									
Grades K-6	113	10	9	25	22	71	63	12	11
Grades 7-9	36	2	6	6	17	17	47	7	19
Grades 10-12	27	1	4	2	7	16	59	2	7
Total	176	14	8	33	19	104	59	21	12
Special Education Personnel									
A. Special Class Teachers[2]									
Grades K-6	47	9	19	20	43	17	36	30	64
Grades 7-9	19	6	32	5	26	6	32	16	84
Grades 10-12	6	2	33	3	50	4	67	1	17
Total	72	17	24	28	39	27	38	47	65
B. Resource Teachers[3]									
Grades K-6	63	10	16	46	73	23	37	23	37
Grades 7-9	34	3	9	21	62	15	44	7	21
Grades 10-12	9	0	0	7	78	2	22	2	22
Total	106	13	12	74	70	40	38	32	30

[1] Includes regular class teachers from both System A and B.

[2] Includes Learning Disabilities class teachers from System A and Resource Room and Remedial Language Arts teachers from System B.

[3] Includes Resource teachers from System A.

Resource teachers working at all grade levels indicated that the most helpful preparation for working with students with learning difficulties was specialized inservice training (70%), followed by regular class experience (38%) and special class experience (30%). It is evident that inservice opportunities have been most important in preparing Resource teachers to work effectively with LD students and their teachers.

Open-ended questions asked respondents to indicate strengths in their training which enable them to meet better the needs of students with learning difficulties in their current teaching situations. Fifty-one respondents noted the perceived strengths of university training. Twenty-five percent of these respondents listed strength areas involving specific knowledge about the learning process and learning disabilities. Theory was cited as a strength by 22% of the respondents. Nineteen percent described assessment and testing procedures as strengths of their university training. Other strength areas specified by the 51 respondents included reading courses (14%), practicum experience (6%), familiarity with materials (8%), and counselling (6%).

Fewer respondents (29) specified weaknesses in their university training. Forty-one percent of these respondents described few opportunities to learn about learning disabilities because there was a lack of courses about learning disabilities and few references to learning disabilities in courses for regular educators. These criticisms are in keeping with Bunch's (1984) observations that university training opportunities have been limited.

Other weaknesses cited were lack of specific information (24%), too much theory (10%), lack of practical applications and experience (17%), and unclear expectations of students (7%).

Sixty-three respondents described strengths of inservice training in preparing them to meet the needs of students with learning difficulties. The perceived strengths were related to the content of the inservice programs. Forty-six percent of the strengths cited involved practical information about teaching strategies important for learning disabled students. Other strengths were general knowledge which increased understanding of learning disabilities (40%), testing and program planning (11%), and information for parents (3%).

The weaknesses in inservice training described by 23 respondents referred to both content and delivery issues. Weaknesses in content were in the areas of specific practical teaching strategies (48%) and diagnosis/remediation (9%). Inservice programs were also criticized for offering too much information in too short a time (9%) and for repetition (13%). Thirteen percent cited lack of opportunities for inservice in learning disabilities and 17% criticized the lack of follow-up and monitoring.

The data from Section A of the survey indicated that special education teachers had more training in learning disabilities than regular class teachers and that inservice was an important source of that training. Regular class teachers in particular had few opportunities to access information about learning disabilities both during preservice university training and through inservice. Perceived strengths and weaknesses of training indicated the need for greater access to practical information about learning disabilities and for improved delivery of inservice.

Planning and Delivery of Inservice Programs

The seven questions of Section B dealt with the mechanical and administrative aspects of inservice programming. Questions and summaries of responses are presented in Tables 9 through 15. The number of responses and the percent of those ranking the answers 1 to 4 or 1 to 5 are shown in each case. The direction of the rank is noted for each question. The data for the questions of Section B were collapsed across school systems, across grade levels and across regular and special education personnel because the order of preferences was consistent across these groups. The few differences observed across groups will be noted where appropriate. Responses of the 35 Special Service personnel are also included in these analyses.

Best Time of Year

As can be seen from Table 9, respondents preferred inservice presentations to be held between September and December (65%). The period from January through March was the second preference (54%). There was strong agreement among respondents (83%) that the worst time of year for inservice was after school was out in June.

Best Time of Week

Four times of the week were ranked to determine the best time of week for inservice programs (see Table 10). During the school day was clearly

Table 9

What is the best time of year for inservice programs?

		%				
	N	1	2	3	4	5
Shortly after school is out in June	347	2	4	3	8	83
Just prior to the start of the school year	347	18	11	14	49	8
September - December	367	65	22	10	2	1
January - March	362	16	54	23	6	1
April - June	353	3	10	48	33	6

1=best time of year
5=worst time of year

Table 10

What is the best time of week for inservice programs?

		%			
	N	1	2	3	4
During the school day	381	72	10	10	8
Immediately following dismissal	372	21	59	13	7
Weekday evening	363	6	24	65	4
Weekend	361	4	6	9	81

1=best time of week
4=worst time of week

Table 11

Which of the following presentation formats for inservice training in learning disabilities would you prefer?

		%				
	N	1	2	3	4	5
One hour	365	10	8	17	35	30
Half day	377	45	24	22	9	(.26)
Full day	374	29	52	18	1	(.26)
Two full days	369	18	13	34	33	2
Weekend	361	3	2	7	21	67

1=most preferred
5=least preferred

Table 12

Who should be included in planning inservice programs on learning disabilities?

	N	%					
		1	2	3	4	5	6
School Psychologist	397	10	22	18	12	10	29
Teachers & Administrators together	397	34	23	14	6	4	20
Administrator	397	0	4	8	21	25	42
Outside Consultant	397	10	16	18	13	12	30
Teachers alone	397	7	11	14	18	17	32
Combination of the above	397	34	4	2	1	4	58

1=most preferred
5=least preferred
6=not selected

Table 13

Which of the following presentation techniques for inservice training in learning disabilities would you prefer?

		%				
	N	1	2	3	4	5
Informal discussion with consultant	397	4	7	10	12	66
Formal presentation by consultant	397	15	11	20	11	43
Consultation on a one-to-one basis	397	5	5	8	12	70
Workshop format with information presented and followed by participant practice	397	45	21	8	8	18
Integrated series of workshops	397	19	33	16	11	21
Observation of other teachers	397	3	7	12	13	65
Sharing session with other teachers	397	4	11	18	20	47

1=first choice
2=second choice
3=third choice
4=fourth choice
5=Not selected among 4 top choices

Table 14

What reasons would encourage you to attend an inservice program in learning disabilities?

		%					
	N	1	2	3	4	5	6
Interest in theoretical issues about learning disabilities	352	5	7	9	38	18	23
To become acquainted with the latest developments in the field of learning disabilities	374	23	21	40	9	6	(.5)
To obtain information and materials to use in present teaching assignments	379	39	35	12	8	3	2
To obtain information that will be used to effect change in classroom behavior/or instruction	380	34	34	22	6	3	1
To enjoy a mentally stimulating break from routine	345	2	2	4	13	27	52
To associate with adults and exchange information with colleagues	348	1	3	12	26	40	18

1=most preferred reason
6=least preferred reason

Table 15

What incentives for inservice training would be most likely to encourage attendance at an inservice program?

		%				
	N	1	2	3	4	5
Release time	389	5	1	11	14	70
Fees paid	387	3	2	16	18	61
Free material	375	6	6	26	21	43
College credit	379	7	9	24	20	40
Salary increments	376	8	5	15	15	56
No incentives	342	43	14	34	4	4

1=not very likely
3=50/50 chance
5=likely

the most preferred time for inservice (72%). Second preference was given to inservice held immediately after dismissal (59%). Weekends were viewed as the worst time for inservice (81%).

Presentation Format

Preferences for inservice presentation formats varying in length are presented in Table 11. The half day format was ranked as the most preferred length for inservice presentations (45%). Full day presentations were the second most preferred format (52%). Within both school sytems, special class teachers preferred full day over half day presentations.

Planning Inservice Programs: Personnel

Teachers preferred to be involved in planning inservice programs in various combinations with other personnel (see Table 12). Consultation among various personnel for planning inservice programs was preferred over decisions made by individual groups alone.

Presentation Techniques

Seven approaches to providing inservice were ranked to determine the most preferred presentation technique (see Table 13). Respondents preferred a workshop format in which information is presented and participant practice is provided (45%). An integrated series of workshops was the second most preferred presentation technique (33%). Formal presentation by a consultant, and sharing sessions with other teachers were also ranked among the four top choices. Few respondents selected consultation on a one-to-one basis, informal discussion with a consultant, or observation of other teachers as preferred presentation techniques for inservice training. However, special class teachers in

System B ranked consultation on a one-to-one basis as the fourth choice (29%). The pattern of preferences also differed for junior and senior high regular class teachers in System B. For this group, formal presentation by a consultant and workshop format were each ranked as first choice by 38% of respondents and the workshop format was ranked as second choice by 38%, followed by a series of workshops as third choice (25%).

Overall, respondents preferred formal approaches to inservice. Participant practice in workshops and opportunities for follow-up provided by an integrated series of workshops appeared to be important aspects of inservice. Flexible access to a variety of inservice presentation techniques appeared to be indicated. Teachers who have basic knowledge may have some needs which are best served through sharing with other teachers and consultation on a one-to-one basis.

Reasons for Attending

Respondents ranked preferred reasons which would encourage them to want to attend an inservice program in learning disabilities. The summary of responses presented in Table 14 indicates that three reasons tended to be given the highest preferences as reasons for attending: to obtain information and materials to use in present teaching assignments, to obtain information that will be used to effect change in classroom behavior or instruction, and to become acquainted with the latest developments in the field of learning disabilities.

Incentives for Inservice Training

The summary of results evaluating various incentives for attending inservice programs presented in Table 15 suggests that the respondents agreed that some form of incentive was necessary to encourage attendance at inservice. Release time, fees paid, and salary increments appeared to be the most preferred incentives. Free material and college credit had less value as incentives.

Summary of Section B data

The seven questions of Section B yielded valuable information for planning inservice programs. There were consistencies across school systems, grade levels taught and regular and special education in preferences for the delivery of inservice programs. Teachers prefer formal half to full day inservice programs offered during the school year and during the school day. Provisions for teacher input into the planning of inservice should be considered and important incentives include release time, payment of fees, and salary increments. An integrated well-planned inservice program using a workshop format which provides participant practice and opportunities for follow-up would appear to best meet the needs of the majority of teachers surveyed. The selection of content for an inservice program should be guided by the reasons teachers attend inservice, namely, to acquire current information which they can apply directly in their teaching assignments.

Self Ratings of Knowledge: Learning Disabilities

Respondents estimated their current level of knowledge in the field of learning disabilities in the areas of general information, assessment and instruction/remediation. Within each area, a list of relevant topics and skill areas was presented and respondents rated themselves on a five point scale for each item with 1 indicating that the respondent felt secure and competent to demonstrate to others, 3 indicating a feeling of competence and 5 indicating that the respondent felt insecure or not trained in this area. Self-ratings of 1 to 3 were combined to represent feelings of competence; self-ratings of 4 and 5 were combined to represent feelings of insecurity or no training. The frequency of respondents rating themselves as competent or insecure varied across grade levels (elementary, junior high and high school) and between regular class teachers and special education personnel. The self-ratings of these groups are discussed below.

Learning Disabilities: General Information

Nineteen topics were presented and respondents indicated their current level of knowledge in terms of general information about learning disabilities.

A) Regular Class Teachers

For regular class teachers, few differences were noted across the two school systems which were combined for presentation. The percent of regular class teachers who gave themselves ratings of 1, 2 or 3 indicating feelings of at least average competence are presented in Table 16 for elementary, junior high and senior high school teachers. As can be seen from Table 16, regular class teachers at the elementary and junior high levels tended to feel more competent than senior high school teachers with regard to general information about learning disabilities. Over 50% of both elementary and junior high teachers felt that they were of at least average competence in the following six

Table 16

Percent of Regular Class Teachers Reporting at Least Average Competence[1] in their Current Knowledge of General Information Topics in Learning Disabilities

General Information Topic	Elementary (n=113)	Junior High (n=36)	High School (n=27)
Definition	**46%**[2]	54%	**32%**
Characteristics	**39**	**49**	**32**
Methods of Identification	**34**	**31**	**16**
Intelligence	54	**41**	**38**
Thinking and Problem-Solving	54	**36**	**40**
Metacognition	**14**	**14**	**4**
Learning Strategies	53	**34**	**32**
Attention Problems	55	**46**	**29**
Memory	**43**	**31**	**32**
Social Skills	74	69	**44**
Self-Esteem	81	74	**48**
Behaviour Management	68	69	52
Computer-Assisted Learning	**33**	**26**	**19**
Study Skills	**49**	**46**	**48**
Neuropsychology	**8**	**12**	**16**
Career/Vocational	**17**	**24**	**32**
Communicating with Parents	69	54	**44**
Communicating with Other Teachers	73	63	52
Integration of Students	61	53	**36**

1 Includes competence ratings of 1, 2, or 3.

2 Topics for which less than 50% of teachers reported at least average competence are presented in bold face type.

areas: self-esteem, social skills, communicating with parents and with other teachers, behavior management and integration of students. Junior high teachers also felt reasonably competent about the definition of learning disabilities while over 50% of elementary school teachers felt secure in their general knowledge about intelligence, thinking and problem-solving, learning strategies and attention problems.

Elementary and junior high teachers indicated several areas in which they felt less confident in their training and competence with regard to general information about learning disabilities. Over 50% of both elementary and junior high teachers rated themselves as 4 or 5 in the following seven areas: neuropsychology, metacognition, career/vocational, computer-assisted learning, methods of identification, characteristics and memory. Over half of the elementary teachers also felt insecure about the definition of learning disabilities and over half of the junior high teachers noted feelings of insecurity in their knowledge about intelligence, thinking and problem-solving and learning strategies as they apply to students with learning disabilities.

In contrast to the elementary and junior high school teachers, over 50% of senior high school teachers reported feelings of insecurity or no training on all but two areas of general information about learning disabilities, namely, behavior management and communicating with other teachers. Over 75% of the senior high school teachers responding to the questionnaire reported feelings of insecurity or no training in the areas of metacognition (96%), methods of identification (84%), neuropsychology (84%), and computer-assisted learning (81%). At least 50% of the senior high school respondents reported feeling insecure or not trained in the following areas: attention problems, definition, characteristics, learning strategies, career/vocational, integration of students, intelligence, thinking and problem-solving, social skills, communicating with parents, study skills and self-esteem.

The few differences noted between school systems follow. At the elementary grade levels, more System A teachers reported at least average competence in general knowledge about learning strategies compared with System B teachers (55% versus 50%). At the junior high level, more System B teachers than System A teachers reported at least average competence in general knowledge about definition (71% versus 43%), characteristics of learning disabilities (65% versus 43%), and communicating with parents (57% versus 48%). At the senior high school level, more System B teachers than System A teachers reported at least average competence in general knowledge about self-esteem (56% versus 44%), study skills (56% versus 44%), and communicating with parents (56% versus 37%) whereas more System A teachers than System B teachers reported feelings of competence in general knowledge of behavior management at the high school level (56% versus 44%).

B) Special Class Teachers

Special class teachers from the two school systems were combined since few differences in self-ratings of competence were noted across systems. The special class teachers at the junior and senior high levels were combined because the numbers were small. The percent of teachers at the elementary level and at the junior high/senior high level reporting at least average competence in general information topics in the area of learning disabilities are presented in Table 17. Overall, special class teachers felt competent in their general knowledge about learning disabilities with at least 50% of the teachers reporting competence in 16 of the 19 areas tapped by the survey. Both elementary and junior high/senior high teachers felt insecure or untrained in three areas, namely, neuropsychology, career/vocational and computer-assisted learning. The area of metacognition was also relatively weak and may be influenced by differences across the two school systems in that more System A teachers reported knowledge of metacognition than did System B teachers (54% versus 42% at the elementary level and 80% versus 42% at the junior/senior high level).

C) Resource Teachers (System A)

The percent of Resource teachers at the elementary, junior high and senior high school levels who reported at least average competence in each of the general information topics about learning disabilities are presented in Table 18. At least half of the Resource teachers reported feeling competent in 15 of the 19 general information areas. Resource teachers consistently reported feelings of insecurity or no training in neuropsychology, computer-assisted learning and career/vocational areas. At the junior and senior high levels, metacognition was also an area of insecurity for many of the teachers surveyed. Half of the Resource teachers at all levels also indicated that they felt insecure or not trained in the area of memory.

Table 17

Percent of Special Class Teachers Reporting at Least Average Competence[1] in their Current Knowledge of General Information Topics in Learning Disabilities.

General Information Topic	Elementary (n=47)	Junior/Senior High (n=25)
Definition	94%	83%
Characteristics	98	79
Methods of Identification	85	58
Intelligence	82	71
Thinking and Problem Solving	83	75
Metacognition	50	50
Learning Strategies	74	79
Attention Problems	63	79
Memory	59	79
Self Esteem	85	88
Behavior Management	78	87
Computer-Assisted Learning	**30**[2]	**42**
Study Skills	78	71
Neuropsychology	**11**	**29**
Career/Vocational	**24**	**46**
Comunicating with Parents	98	75
Communicating with Other Teachers	96	88
Integration of Students	91	93

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[1] Includes competence ratings of 1, 2, or 3.

[2] Topics for which less than 50% of teachers reported at least average competence are presented in bold face type.

Table 18

Percent of Resource Teachers Reporting at Least Average Competence[1] in their Current Knowledge of General Information Topics in Learning Disabilities.

General Information Topic	Elementary (n=60)	Junior High (n=34)	High School (n=9)
Definition	81%	76%	63%
Characteristics	80	68	75
Methods of Identification	75	55	63
Intelligence	84	78	63
Thinking and Problem Solving	74	64	50
Metacognition	56	**35**[2]	**38**
Learning Strategies	76	68	88
Attention Problems	53	55	63
Memory	50	50	50
Social Skills	70	68	75
Self Esteem	78	82	75
Behavior Management	66	68	75
Computer-Assisted Learning	**22**	**26**	**13**
Study Skills	59	88	75
Neuropsychology	**19**	**15**	**13**
Career/Vocational	**25**	**33**	**38**
Communicating with Parents	85	85	88
Communicating with Other Teachers	90	91	88
Integration of Students	88	65	63

1 Includes competence ratings of 1, 2, or 3.

2 Topics for which less than 50% of teachers reported at least average competence are presented in bold face type.

D) Summary

Overall, special education personnel were more confident than regular class teachers in their knowledge of general information about learning disabilities. The regular class teachers reported a lack of general information about learning disabilities, particularly at the senior high school level. Lack of confidence in basic information about characteristics and identification of learning disabilities, as well as other specific areas, has important implications for teaching practice because there are increasing demands put on regular class teachers to identify and effectively manage LD students within their regular classrooms. Regular class teachers need support and inservice opportunities to increase their knowledge about learning disabilities and their confidence in their competence to meet the needs of LD students.

Special class teachers and resource teachers were similar in their overall confidence in their general knowledge about learning disabilities. Areas of insecurity involved knowledge of specialized approaches (e.g., neuropsychology) or more current emphasis in the field of learning disabilities (e.g., metacognition, computer-assisted learning and career/vocational education). In contrast to the needs of regular class teachers, general information about learning disabilities is not a critical inservice need for special education personnel. Periodic access to the most current information in the field could benefit special education personnel and contribute to professional growth.

Learning Disabilities: Assessment

A) Regular Class Teachers

At least 50% of elementary school teachers rated themselves as of at least average competence in six areas of assessment compared with one area for junior high and no area for senior high school teachers (See Table 19). Areas of competence reported by elementary school teachers included the assessment of spelling, mathematics, handwriting, written expression, reading and social skills. Fifty percent of junior high teachers reported feelings of competence in the assessment of social skills whereas there was no assessment area in which at least 50% of senior high school teachers reported feeling competent. Insecurity or lack of training in screening procedures was consistently reported as an area of weakness by a majority of teachers across the three levels. Assessment of study skills, intelligence, oral language and attention problems were also areas of insecurity across levels.

B) Special Class Teachers

Special class teachers at the elementary and junior/senior high levels reported competence in all but one area of assessment tapped by the survey, namely, the assessment of intelligence (See Table 20). Other areas in which relatively large numbers of special class teachers reported feelings of insecurity or no training were in the assessment of oral language and study skills at the elementary level and in the assessment of attention problems and screening procedures at the junior/senior high level.

Differences across school systems at the elementary level were noted in five areas of assessment in which a higher percentage of

Table 19

Percent of Regular Class Teachers Reporting at Least Average Competence[1] in their Current Knowledge of Assessment

Assessment Topic	Elementary (n=113)	Junior High (n=36)	High School (n=27)
Screening Procedures	**21%**[2]	**19%**	**8%**
Assessment of Oral Language	**49**	**28**	**16**
Assessment of Reading	65	**34**	**24**
Assessment of Written Expression	69	**34**	**32**
Assessment of Spelling	74	**34**	**32**
Assessment of Handwriting	71	**38**	**8**
Assessment of Mathematics	73	**31**	**28**
Assessment of Attention Problems	**45**	**34**	**36**
Assessment of Intelligence	**41**	**44**	**36**
Assessment of Social Skills	60	50	**40**
Assessment of Study Skills	**44**	**31**	**40**

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[1] Includes competence ratings of 1, 2, or 3.

[2] Topics for which less than 50% of teachers reported at least average competence are presented in bold face type.

Table 20

Percent of Special Class Teachers Reporting at Least Average Competence[1] in their Current Knowledge of Assessment

Assessment Topic	Elementary (n=47)	Junior/Senior High (n=25)
Screening Procedures	67%	50%
Assessment of Oral Language	52	54
Assessment of Reading	94	83
Assessment of Written Expression	70	71
Assessment of Spelling	94	83
Assessment of Handwriting	83	79
Assessment of Mathematics	83	71
Assessment of Attention Problems	61	50
Assessment of Intelligence	**45**[2]	**46**
Assessment of Social Skills	63	75
Assessment of Study Skills	52	67

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1 Includes competence ratings of 1, 2, or 3.

2 Topics for which less than 50% of teachers reported at least average competence are presented in bold face type.

System A teachers reported feelings of insecurity or no training compared with System B teachers: screening procedures (61% versus 40%, respectively), assessment of intelligence (85% versus 40%, respectively), assessment of study skills (69% versus 20%, respectively) and assessment of attention problems (60% versus 54%, respectively). At the junior/senior high level, more System B teachers reported weakness in the assessment of attention (60% versus 47%) and more System A teachers reported weakness in the assessment of intelligence (58% versus 40%).

C) Resource Teachers (System A)

Resource teachers at the elementary level reported feeling competent in all areas of assessment with the exception of the assessment of intelligence (See Table 21). At the junior high level, weaknesses were reported in the assessment of attention problems and mathematics and screening procedures. Senior high school Resource teachers reported feelings of insecurity in the assessment of oral language, handwriting and attention problems.

D) Summary

Similar to the finding for general information topics, special education personnel and elementary level teachers expressed greater confidence in their training and competence in assessment compared with regular class teachers and junior and senior high personnel. All regular class teachers appear to need training in screening to assist in the referral and identification of students with learning difficulties. Junior and senior high regular class teachers have general self-perceived weaknesses in assessment skills indicating the need for

Table 21

Percent of Resource Teachers Reporting at Least Average Competence[1] in their Current Knowledge of Assessment

Assessment Topic	Elementary (n=60)	Junior High (n=34)	High School (n=9)
Screening Procedures	78%	**47%**[2]	63%
Assessment of Oral Language	63	91	**38**
Assessment of Reading	95	77	63
Assessment of Written Expression	78	94	75
Assessment of Spelling	90	71	75
Assessment of Handwriting	83	82	**38**
Assessment of Mathematics	81	**41**	50
Assessment of Attention Problems	61	**39**	**43**
Assessment of Intelligence	**48**	53	50
Assessment of Social Skills	54	65	63
Assessment of Study Skills	56	53	86

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[1] Includes competence ratings of 1, 2, or 3.

[2] Topics for which less than 50% of teachers reported at least average competence are presented in bold face type.

inservice training opportunities providing information about procedures for assessing and monitoring basic skill areas withing content area classes.

Consistent with surveys of LD professionals in the USA (e.g., Newcomer, 1978), elementary level special class teachers and Resource teachers were most confident in their competence in the assessment of reading and other basic skills. All special education personnel lacked confidence in their competence in the assessment of intelligence, which is generally the responsibility of school psychologists and not perceived as important to special education teaching roles of the special education personnel. Resource teachers at the junior and senior high school levels identified the largest number of assessment areas in which they did not feel competent.

Learning Disabilities: Instruction/Remediation

A) Regular Class Teachers

Elementary school teachers again reported feelings of competence in ten areas pertaining to the instruction and remediation of learning disabled students whereas over 50% of the junior high and senior high school teachers reported feelings of insecurity or of no training in all remediation/instruction areas (See Table 22). The areas of competence reported by elementary teachers included instruction/remediation in mathematics, reading, written expression, spelling, handwriting, social skills, oral language, attention, integration of students and behavior management strategies. Areas of weakness reported across all three levels were problem-solving/thinking, learning strategies, individualization of instruction and developing individual education plans.

Table 22

Percent of Regular Class Teachers Reporting at Least Average Competence[1] in Instruction/Remediation of Students with Learning Disabilities.

Instruction/Remediation	Elementary (n=113)	Junior High (n=36)	High School (n=27)
Oral Language	57%[2]	**36%**	**13%**
Reading	72	**28**	**12**
Written Expression	72	**38**	**16**
Spelling	72	**38**	**20**
Handwriting	72	**31**	**12**
Mathematics	74	**36**	**16**
Attention	55	**38**	**24**
Social Skills	61	**47**	**36**
Problem Solving/Thinking	**43**	**31**	**32**
Learning Strategies	**37**	**39**	**32**
Behavior Management Strategies	51	**44**	**36**
Study Skills	**36**	**42**	**32**
Individualization of Instruction	**44**	**38**	**36**
Developing Individual Education Plans	**37**	**31**	**32**
Integration of Students	55	**44**	**36**

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[1] Includes competence ratings of 1, 2, or 3.

[2] Topics for which less than 50% of teachers reported at least average competence are presented in bold face type.

B) Special Class Teachers

As can be seen from Table 23, when the two school sytems were combined, over 50% of the special class teachers reported at least average competence in all areas of instruction/remediation of learning disabled students. However, there were differences across school systems at the elementary level with System A teachers reporting feelings of insecurity or that they were not trained in instruction/remediation in the areas of attention (85%), study skills (61%), learning strategies (69%), social skills (61%), problem-solving/thinking (61%), language (54%) and behavior management strategies (69%).

C) Resource Teachers (System A)

The data presented in Table 24 indicate that at least half of the Resource teachers reported at least average competence in all areas of instruction/remediation with three exceptions: study skills at the elementary level (48% felt competent), attention at the junior high level (41% reported feelings of competence) and social skills at the senior high level (38% reported feelings of competence). Attention also appeared to be an area of relative weakness for Resource teachers at the elementary and senior high levels. In addition, Resource teachers at the senior high level reported feelings of relative insecurity in instruction/remediation of handwriting, and problem-solving/thinking and in the integration of students.

D) Summary

Special education personnel perceived themselves to be competent in the instruction/remediation of students with learning disabilities. Minor areas of self-rated weakness reported by Resource teachers were in

Table 23

Percent of Special Class Teachers Reporting at Least Average Competence[1] in Instruction/Remediation of Students with Learning Disabilities

Instruction/Remediation	Elementary (n=47)	Junior/Senior High (n=25)
Oral Language	62%	63%
Reading	87	88
Written Expression	85	79
Spelling	85	92
Handwriting	89	75
Mathematics	92	71
Attention	50	71
Social Skills	65	79
Problem Solving/Thinking	57	63
Learning Strategies	64	58
Behavior Management Strategies	76	83
Study Skills	54	75
Individualization of Instruction	81	79
Developing Individual Education Plans	77	75
Integration of Students	87	83

1 Includes competence ratings of 1, 2, or 3.

Table 24

Percent of Resource Teachers Reporting at Least Average Competence[1] in Instruction/Remediation of Students with Learning Disabilities.

Instruction/Remediation Area	Elementary (n=60)	Junior High (n=34)	High School (n=9)
Oral Language	59%	53%	88%
Reading	88	82	75
Written Expression	80	83	75
Spelling	86	88	88
Handwriting	80	73	50
Mathematics	83	79	75
Attention	50	**41**[2]	50
Social Skills	63	61	**38**
Problem Solving/Thinking	56	61	50
Learning Strategies	57	61	63
Behavior Management Strategies	58	55	75
Study Skills	**48**	79	75
Individualization of Instruction	76	85	75
Developing Individual Education Plans	79	58	75
Integration of Students	81	64	50

1 Includes competence ratings of 1, 2, or 3.

2 Topics for which less than 50% of teachers reported at least average competence are presented in bold face type.

study skills (elementary), attention (junior high) and social skills (senior high). However, there were differences in the confidence of special class teachers across school systems with System A teachers expressing insecurity in several instructional/remediation areas which could be addressed through inservice programs.

Regular class teachers at the elementary level were confident in their competence of most basic instructional areas. Individualization of instruction and developing individual education plans were self-perceived areas of weakness and are areas identified as important in the effective teaching of LD students in regular classrooms (e.g., Monaco & Chappetta, 1978; Sokolyk, 1981).

There is a major inservice need to provide information about instruction/remediation of LD students to regular class teachers at the junior and senior high school levels. Whereas the general training of elementary teachers gives them confidence across many instructional areas, junior and senior high school teachers feel generally unprepared to meet the needs of LD students in their regular classes.

Preferred Topics for Inservice

Respondents' preferences for inservice topics were examined in the areas of general information, assessment and instruction/remediation. In each of these areas, respondents were asked to select five of the topics that would be of most interest to them in an inservice program. Choices were ranked from 1 to 5 with 1 being the most preferred topic. To determine which topics in an area were of most interest to respondents, a weighting system was used. The number of respondents assigning a rank of 1 to 5 to a topic was determined; the ranks were weighted as follows, rank of 1 X 5, rank of 2 X 4, rank of 3 X 3, rank of 2 X 2, and rank of 1 X 1; and, a total weighted score was derived for each topic by adding the weighted scores across the five ranked positions. As the sum of weighted scores represented relative preferences, the weighted scores were ranked for various groups of respondents and the ranks of the preferred choices were compared.

A) Regular Class Teachers

General information, assessment and instruction/remediation topics which were ranked highest by the elementary, junior high and senior high school regular class teachers are presented in Tables 25 through 27. The top five choices in each area are noted. Regular class teachers consistently ranked three general information topics among their five top choices: methods of identification, learning strategies and thinking/problem-solving. Screening procedures, assessment of attention problems and assessment of social skills were consistently selected as assessment topics for an inservice program in learning disabilities. Instruction/remediation in learning strategies and problem-solving/thinking were given high rankings by regular class teachers at all levels.

Five of these eight highly ranked topics also represented areas in which fewer than 50% of the regular class teachers at any grade level felt competent (i.e., methods of identification, screening procedures, assessment of attention problems and instruction/remediation in learning strategies and problem-solving). Fewer than 50% of the junior and senior high teachers felt competent in the other three areas involving

Table 25

General Information Inservice Topics Ranked 1 to 5 by Elementary, Junior High and High School Regular Class Teachers

General Information Topic	Regular Class Teachers' Ranking		
	Elementary (n=113)	Junior High (n=36)	High School (n=27)
Characteristics	5	3	(7)[1]
Methods of Identification	1	4	1
Problem Solving/Thinking	4	5	3
Learning Strategies	2	1	2
Attention Problems	3	(7)	4
Behavior Management Strategies	(6)	2	5

[1] Numbers in brackets indicate ranks above 5.

Table 26

Assessment Inservice Topics Ranked 1 to 5 by Elementary, Junior High and High School Regular Class Teachers

Assessment Topics	Regular Class Teachers' Ranking		
	Elementary (n=113)	Junior High (n=36)	High School (n=27)
Screening Procedures	1	5	1
Oral Language	3	(8)[1]	(8)
Reading	4	(6)	4
Attention Problems	2	1	3
Intelligence	(6)	4	(7)
Social Skills	3	2	5
Study Skills	(7)	3	2

1 Numbers in brackets indicate ranks above 5.

Table 27

Instruction/Remediation Inservice Topics Ranked 1 to 5 by Elementary, Junior High and High School Regular Class Teachers

Instruction/Remediation Topics	Regular Class Teachers' Ranking Elementary (n=113)	Junior High (n=36)	High School (n=27)
Mathematics	(11)[1]	(9)	5
Attention	(8)	(7)	4
Social Skills	(10)	4	(10)
Problem solving/Thinking	5	5	2
Learning Strategies	1	2	1
Behavior Management Strategies	4	(7)	3
Individualization of Instructions	2	1	(8)
Integration of students	3	3	(7)

1 Numbers in brackets indicate ranks above 5.

general information about thinking/problem-solving and learning strategies and the assessment of social skills. Although there was some correspondence between selected priorities for inservice content and perceived areas of weakness, regular class teachers did not select the following general information topics to remediate their weakest areas: metacognition, neuropsychology, and computer-assisted learning. It may be that they do not consider these topics to be critical to the effective teaching of LD students in the regular classroom.

Other preferences for inservice topics varied across grade levels taught. Topics of interest to elementary and junior high teachers, but not to senior high school teachers, were general information about characteristics of learning disabilities, individualization of instruction and integration of students. Junior high and senior high school teachers shared interests in general information about behavior management and assessment of study skills. Elementary and senior high school teachers shared interest in general information about attention problems, assessment of reading, and behavior management strategies. Only one topic, assessment of oral language, was ranked highly only by elementary regular class teachers. Topics of interest only to junior high regular class teachers were the assessment of intelligence and instruction/remediation in social skills. Only regular class teachers at the senior high school level gave high rankings to instruction/remediation of attention and mathematics.

B) Special Class Teachers

The general information inservice topics ranked from 1 to 5 by elementary and junior/senior high special class teachers for the two systems combined are presented in Table 28. Rankings for assessment and instruction/remediation topics are presented in Tables 29 and 30. Inservice topics which were ranked among the top five choices of both elementary and junior/senior high special class teachers were: general information about learning strategies, memory, computer-assisted learning, and neuropsychology; assessment of attention problems and reading; and instruction/remediation in thinking/problem-solving, learning strategies, oral language and study skills. Topics of particular interest only to elementary special class teachers included: general information about attention problems and metacognition; assessment of oral language and written expression; and instruction/remediation in attention and social skills. In contrast, only junior/senior high special class teachers showed particular interest in the following topics: general information about self-esteem and social skills; assessment of social skills and study skills; and, instruction/remediation of written expression and the integration of students.

As the majority of special class teachers felt competent in general information, assessment and instruction/remediation of LD students, few of the priorities for inservice were selected to remediate self-perceived deficit areas. The selections which may have been made in response to perceptions of relative weakness were: general information about neurospsychology, computer-assisted learning and metacogntion; assessment of oral language and intelligence; and, instruction in problem-solving/thinking and learning strategies.

Table 28

General Information Inservice Topics Ranked 1 to 5 by Elementary and Junior/Senior High Special Class Teachers

General Information Topic	Special Class Teachers' Ranking Elementary (n=44)	 Junior/Senior High (n=36)
Metacognition	5	(8)[1]
Learning Strategies	4	1
Attention Problems	1	(10)
Memory	2	3**
Social Skills	(10)	4
Self Esteem	(9)	2
Computer-assisted Learning	3*	3**
Neuropsycholgy	3*	5

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[1] Numbers in brackets indicate ranks above 5.

* Topics assigned equal weightings/ranks.

**Topics assigned equal weightings/ranks.

Table 29

Assessment Inservice Topics Ranked 1 to 5 by Elementary and Junior/Senior High Special Class Teachers

Assessment Topics	Special Class Teachers' Ranking	
	Elementary (n=44)	Junior/Senior High (n=36)
Screening Procedures	(7)[1]	1
Oral Language	1	3
Reading	(8)	5
Written Expression	4	2
Attention Problems	2	(7)
Intelligence	5	4*
Social Skills	3	(6)
Study Skills	(6)	4*

1 Numbers in brackets indicate ranks above 5.

* Topics assigned equal weightings/ranks.

**Topics assigned equal weightings/ranks.

Table 30

Instruction/Remediation Inservice Topics Ranked 1 to 5 by Elementary and Junior/Senior High Special Class Teachers

Instruction/Remediation Topics	Special Class Teachers' Ranking Elementary (n=44)	Junior/Senior High (n=36)
Oral Language	3	4
Written Expression	(8)[1]	1
Attention	1*	(9)
Social Skills	4	(8)
Problem-solving/thinking	1*	2
Learning Strategies	2	3**
Study Skills	5	5
Integration of Students	(12)	3**

1 Numbers in brackets indicate ranks above 5.

* Topics assigned equal weightings/ranks.

**Topics assigned equal weightings/ranks.

C) Resource Teachers

The five topics receiving the highest weightings as preferred topics for an inservice program in learning disabilities by Resource teachers at the elementary, junior high and high school levels are presented in Table 31 for general information topics, Table 32 for assessment topics and Table 33 for instruction/remediation topics. In terms of general information topics, Resource teachers consistently ranked learning strategies as the most preferred inservice topic, even though the majority of Resource teachers felt competent in this area. Memory and metacognition were also among the top five inservice topic choices of Resource teachers at all levels and were self-reported areas of relative weakness. The ranks of other topics differed for Resource teachers consulting at different grade levels and did not correspond consistently to self-perceived areas of weakness. Elementary and junior high Resource teachers ranked attention problems as their second most preferred choice, whereas attention problems were not of interest to high school Resource teachers. Thinking/problem-solving was ranked as fifth choice by elementary Resource teachers (sixth by junior high Resource teachers). Methods of identification were ranked third by junior high Resource teachers (sixth by both elementary and high school Resource teachers). High school Resource teachers differed from the other two groups in their selection of computer-assisted learning (third) and integration of students (fifth).

Three assessment topics were consistently among the five top choices for an inservice program for all Resource teachers: assessment of attention problems, screening procedures, assessment of social skills

Table 31

General Information Inservice Topics Ranked 1 to 5 by Elementary, Junior High and High School Resource Teachers

General Information Topic	Resource Teachers' Ranking		
	Elementary (n=54)	Junior High (n=33)	High School (n=8)
Methods of Identification	(6)[1]	3	(6)
Thinking and Problem Solving	5	(6)	(9)
Metacognition	4	5	4
Learning Strategies	1	1	1
Attention Problems	2	2	(not chosen)
Memory	3	4	2
Computer-Assisted Learning	(9)	(11)	3
Integration of Students	(14)	(13)	5

[1] Numbers in brackets indicate ranks above 5.

Table 32

Assessment Inservice Topics Ranked 1 to 5 by Elementary, Junior High and High School Resource Teachers

Assessment Topics	Resource Teachers' Ranking		
	Elementary (n=54)	Junior High (n=33)	High School (n=8)
Screening Procedures	4	3	1
Language	2	4	(7)[1]
Reading	(9)	(8)	3*
Written Expression	(8)	5	4
Attention Problems	1	1	2
Intelligence	(7)	(7)	3*
Social Skills	3	2	5
Study Skills	5	(6)	(6)

1 Numbers in brackets indicate ranks above 5.

* Topics assigned equal weightings/ranks.

Table 33

Instruction/Remediation Inservice Topics Ranked 1 to 5 by Elementary, Junior High and High School Resource Teachers

Instruction/Remediation Topics	Resource Teachers' Ranking		
	Elementary (n=54)	Junior High (n=33)	High School (n=8)
Oral Language	(7)[1]	4	(not chosen)
Reading	(12)	(10)	2
Written Expression	(6)	(11)	5*
Attention Problems	1	1	(10)
Social Skills	4	(8)	5*
Problem Solving/Thinking	2	3	4**
Learning Strategies	3	2	1
Behavior Management Strategies	5	(7)	3
Developing Individual Education Plans	(11)	5	(8)
Integration of Students	(13)	(9)	4**

[1] Numbers in brackets indicate ranks above 5.

* Topics assigned equal weightings/ranks.

**Topics assigned equal weightings/ranks.

(See Table 32). Resource teachers did not consistently report feelings of insecurity in the areas chosen for inservice. Other rankings differed across grade levels. Elementary Resource teachers included assessment of oral language and study skills in their five top choices. Junior high Resource teachers selected assessment of oral language and written expression among prefered topics. Senior high Resource teachers selected assessment of reading, intelligence and written expression.

Resource teachers' preferences for inservice topics in instruction/remediation of learning difficulties are presented in Table 33. Instruction in learning strategies and problem- solving/thinking were among the five top choices across grade levels. At the elementary and junior high levels, remediation of attention problems was the most preferred inservice topic. At the elementary level, social skills and behaviour management strategies were given top rankings. At the junior high level, oral language and developing individual education plans were among the five top ranked topics. At the senior high level, instruction in reading, behavior management strategies, integration of students, social skills and written expression were top choices.

In planning inservice programs in learning disabilities for Resource teachers one must consider the differences in preferred content for Resource teachers consulting to different grade levels. However, some topics were of interest across grade levels, namely, learning strategies (general information and instruction), memory (general information), metacognition (general information), problem-solving/thinking (instruction), screening procedures and assessment of social skills.

D) Summary

There were consistencies in preferences for inservice topics observed across groups of respondents varying in their teaching context. Learning strategies are a major area of interest to educators. General information about learning strategies and instruction/remediation in learning strategies were consistently among the five top choices for inservice of regular class, special class and Resource teachers across all grade levels.

A second major interest area was problem-solving/thinking. Regular class teachers across all grade levels expressed interest in general information, assessment and instruction/remediation in problem-solving/thinking. Interest in instruction/remediation in problem-solving/thinking was shared by special class and Resource teachers across grade levels.

Regular class teachers and special education teachers across all grade levels selected assessment of attention problems as a priority for inservice. Special class teachers and Resource teachers shared interest in acquiring general information about memory.

Methods of identification and screening procedures were important topic areas. Regular class teachers across grade levels gave high rankings to these topics. Resource teachers also identified screening procedures as a topic of interest.

Other topics of interest to respondents varied in terms of teaching role and grade level. Differences in training and in the demands of different teaching contexts appeared to contribute to variations in the selection of inservice topics.

Conclusions and Recommendations

The information gathered in the present project supports the importance of providing effective inservice training programs in learning disabilities. The positive response to Learning Centre inservice programs and the many requests for presentations provided evidence that both regular and special education personnel perceive the need to extend their knowledge in the area of learning disabilities and many take the initiative to do so. A review of the literature to determine the knowledge, skills and competencies needed by teachers of students with learning disabilities provided further evidence that regular and special education teachers need ongoing access to inservice training in the area of learning disabilities. Regular class teachers may lack confidence in their ability to teach learning disabled students effectively . Special education personnel perceive weakness in their competence and training in several areas which they consider to be important in the effective educational management of LD students. The feelings of insecurity on the part of regular educators were confirmed by the self-ratings of competence by respondents to the survey distributed in the present study. The survey results provided evidence that inservice training in learning disabilities is essential. The teachers surveyed had limited opportunities for acquiring information about learning disabilities in their preservice university preparation. The majority of regular educators surveyed had no training in learning disabilities and more than half of the special education personnel received much of their training through inservice. Resource teachers and senior high special class teachers in particular reported that inservice training was most helpful in preparing them to work with students with learning difficulties.

Selection of the content of inservice training in learning disabilities must depend primarily upon professional concensus and careful assessment of local needs. A review of the literature in an attempt to more clearly describe the knowledge, skills and competencies needed by teachers of students with learning disabilities revealed a dearth of empirical data assessing the validity of the competencies derived from professional concensus. There have been few studies of effective teaching in special education. The available information suggests that regular and special education personnel, and elementary, junior high and senior high teachers may differ in the knowledge required for the effective teaching of LD students.

While the survey of local needs in the area of learning disabilities was limited to two urban school boards, the findings have wider implications for teacher training institutions and professional development committees of school systems in Alberta. The survey supported the need for inservice training opportunities, provided suggestions for more effective planning and delivery, and indicated directions for selecting content to meet the needs of teachers working with LD students in various contexts.

Responses to the Learning Disabilities: Needs Assessment Survey indicated consistencies across regular and special education and across grade levels in preferences for the planning and delivery of inservice programs. Teachers prefer formal half to full day inservice programs offered during the school year and during the school day. Provisions for teacher input into the planning and inservice and incentives were seen as important. An integrated well-planned inservice program using a workshop format which provides participant practice and opportunities for follow-up would appear to best meet the needs of the majority of teachers surveyed. However, informal consultation may also be important to teachers who have basic knowledge and require more specific input for handling immediate issues. The selection of content for an inservice program should be guided by the reasons teachers attend inservice, namely, to acquire current information which they can apply directly in their teaching assignments. Content must thus be appropriate to the demands of varying teaching contexts.

Survey questions tapping self-ratings of competence indicated that special education personnel were more confident than regular class teachers in their competence and training in general information, assessment and instruction/remediation of students with learning disabilities. For regular class teachers, feelings of competence varied across grade levels taught. Senior high school teachers reported an overall lack of information across all topics related to learning disabilities. Junior high teachers also lacked confidence in their competence and training to meet the needs of LD students. Although elementary regular class teachers lacked general information about learning disabilities, they felt competent in assessment and instruction in most basic skill areas. The self-identified weaknesses of regular class teachers in knowledge about learning disabilities, particularly screening, identification and individualization of instruction, have important implications for teaching practice as there are increasing demands put on regular class teachers to identify and effectively manage LD students within their regular classrooms. Regular class teachers need support and inservice opportunities to increase their knowledge about learning disabilities and their confidence in their competence to meet the needs of LD students.

While special education personnel expressed overall confidence in their knowledge about learning disabilities, junior and senior high personnel self-identified more areas of weakness than personnel teaching at the elementary level, and areas of self-perceived competence tended to vary across school systems. It is important that special education personnel have periodic access to the most current information in the field of learning disabilities as well as in specific areas of self-perceived weakness.

In selecting content for inservice programs in learning disabilities, areas of self-identified weakness suggest important areas of need. However, teachers' interest in topics must also be considered as the teachers surveyed did not always select areas of self-perceived weakness as priorities for inservice. Preferences for inservice topics varied across grade levels and regular and special education. However, there was consistently high interest in learning strategies, problem-solving/thinking and assessment of attention problems, and considerable interest in memory, methods of identification and screening procedures. These topics appear to be highly relevant to teachers in many contexts and could provide a core content for inservice training programs in learning disabilities.

The following recommendations are made on the basis of the information gathered from Learning Centre inservice programs, the literature survey and the Needs Assessment Survey:

1) University teacher training programs should offer courses in learning disabilities to regular education students and insure that information about learning disabilities is included in regular education courses for elementary level, junior high and secondary level Education students.

2) Research is needed to examine effective teaching in special education and to provide empirical validation of competencies for teachers of LD students which are currently derived from professional concensus.

3) Validation of the relevance of the knowledge, skills and competencies targeted in inservice programs in learning disabilities should be addressed through follow-up studies of the effects of the teacher training on classroom practice and on student outcomes. This research could contribute to identifying critical variables in the effective teaching of LD students in a variety of contexts.

4) School systems should continue to organize formal inservice in learning disabilities for special education personnel, particularly at the junior and senior high school levels.

5) School systems should initiate formal inservice in learning disabilities for regular class teachers at all grade levels.

6) To maximize participation in inservice training, several planning and delivery issues must be considered:
   a) Teachers should be involved in planning inservice programs.
   b) Inservice should be offered early in the school year and during the school day.
   c) Incentives for inservice participation should be offered, such as, release time and payment of fees.
   d) An inservice program should be integrated and well-planned using a workshop format which provides participants practice and opportunities for follow-up.
   e) Formal inservice presentations should be a half-day to a full-day in length.
   f) Flexibility is recommended in recognizing that teachers in some contexts may require inservice opportunities involving one-to-one consultation.

7) The content of inservice programs in learning disabilities must be selected to meet the varying needs of teachers in regular and special education, and of teachers of different grade levels. Areas of weakness and areas of interest identified by teachers should be combined with the professional concensus of experts in learning disabilities to develop effective inservice programs. On the basis of the needs identified in the present project, it is recommended that decisions about inservice consider the following

areas of need and interests identified for teachers in varying teaching contexts:

a) Elementary regular class teachers expressed particular interest in several areas which they perceived as areas of weakness in terms of their competence and training: methods of identification, characteristics, screening procedures, assessment of oral language and attention problems and instruction/remediation areas involving learning strategies, problem-solving/thinking, individualization of instruction.

b) Junior high regular class teachers reported lack of confidence in almost all general information, assessment and instruction/remediation areas. Of these, they expressed particular interest in learning strategies, problem-solving/thinking, social skills, characteristics, methods of identification and screening; assessment of attention problems, study skills and intelligence; individualization of instruction and integration of students.

c) Senior high regular class teachers felt competent in only two areas related to learning disabilities namely, behavior management and communicating with other teachers. Primary interest areas included methods of identification and screening, learning strategies and thinking/problem-solving, attention problems, behavior management, instruction in mathematics, and assessment of study skills, reading and social skills.

d) Both elementary and junior/senior high special class teachers reported interest in three topics in which they lacked confidence in their current knowledge: neuropsychology, computer-assisted learning and assessment of intelligence. Special class teachers felt competent in instruction/remediation areas but expressed interest in further information regarding problem-solving/thinking, learning strategies, oral language, social skills and study skills. Differences across grade levels and across the school systems surveyed must be considered in identifying other topic areas.

e) Elementary resource teachers did not express interest in inservice in the few areas of self-reported weakness which they may not have perceived to be important to their role. Areas of interest included learning strategies, attention problems, thinking/problem-solving, memory, metacognition, social skills, study skills, behavior management, screening procedures and oral language assessment.

f) Junior high resource teachers were interested in inservice in several areas in which they perceived weaknesses: metacognition, screening procedures, and attention problems. Other interest areas were learning strategies, memory, thinking/problem-solving, methods of identification, assessment and remediation of language, assessment of written expression and social skills, and developing individual education plans.

g) Senior high resource teachers expressed interest in opportunities to increase competence in the following self-perceived areas of weakness: metacognition, computer-assisted learning, assessment of intelligence, and instruction in social skills. Other interest areas included learning strategies, memory, screening procedures; assessment and instruction of reading, written expression and social skills; assessment of intelligence; thinking/problem-solving instruction, behavior management strategies and integration of students.

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for Students with
Learning Difficulties

Return to:

Learning Centre:
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Calgary, Alberta T2N 4N9
Phone: (403)270-3711

C.B.E., C.C.B.E.
A.C.H. - may return via
inter-departmental mail

Appendix 1

PRESENTATION EVALUATION

DATE: ______________________________

In order to better serve the public by providing meaningful information about learning disabilities, we are asking your assistance in answering this questionnaire.

PRESENTATION ____

PRESENTORS ____

I. Background Information

1. Describe your present occupation: ______________________________
2. Number of years in current occupation: ______________________________
3. What is your educational background: ______________________________
4. What age category do you fall into:
   1 - 20; 21 - 30; 31 - 40; 41 - 50; 51 - 60; 61 - 70;
5. If applicable, what is your area of specialization ______________
   ____
6. Which best describes your reason for attending? Choose several if applicable:
   a) To improve my knowledge/skills in my specialty ______________
   b) For self improvement and interest ______________________
   c) To learn about another area ______________________________
   d) It was arranged for me ______________________________

FOUNDING MEMBERS
Alberta Children's Hospital, Alberta Teacher's Association, Calgary Association for Children with Learning Disabilities, Calgary Board of Education, Calgary Board of Health, Calgary Catholic Board of Education, [illegible] Club of Calgary, University of Calgary

The Learning Centre
Spring 1986

Appendix 2

LEARNING DISABILITIES: NEEDS ASSESSMENT SURVEY

A. Background information will assist in planning professional development activities relevant and meaningful to educators who differ in experience, training and teaching assignments.

1. Current position (please circle)

   a. Regular Class Teacher
   b. Learning Disabilities Class Teacher
   c. Resource Room Teacher
   d. Resource Teacher
   e. Remedial Language Arts Teacher
   f. Corrective Learning Teacher
   g. Special Services personnel, please describe____________________

2. Grade Level(s) you currently teach or provide services for (circle more than one if applicable)

   a. K-3
   b. 4-6
   c. 7-9
   d. 10-12

3. Briefly describe content area(s) that you have taught in the last two years.

   ____

   ____

   ____

   ____

4. Sex

   a. male
   b. female

5. Age Range

   a. 21-30
   b. 31-40
   c. 41-50
   d. 51-60
   e. 61-70

6. Years of teaching experience

   a. 2 or less
   b. 3-7
   c. 8-15
   d. 16 or more

7. Educational Background (circle all applicable)

   a. B.A., B.Sc.
   b. B.Ed.
   c. Dip.Ed.
   d. M.Ed.
   e. M.A., M.Sc.
   f. Other (specify) __________

8. Please indicate previous training in the area of learning disabilities:

a. No specific training
b. Undergraduate courses in learning disabilities. Please indicate the number of half course equivalents

____

c. Graduate courses in learning disabilities. Please indicate the number of half course equivalents

____

d. Inservice courses (please describe)

____

____

9. What have you found to be most helpful in preparing you to work with students with learning difficulties?

a) specialized preservice training
b) specialized inservice training
c) regular class experience
d) special class experience

10. What do you see as strengths in your training in terms of meeting the needs of students with learning difficulties in your current teaching situation?

a) strengths obtained from university training:

____

____

____

____

b) strengths obtained from inservice training

____

____

____

____

11. What do you see as weaknesses in your training in terms of meeting the needs of students with learning difficulties in your current teaching situation?

a) university training weaknesses:

____

____

____

____

b) inservice training weaknesses:

____

____

____

____

B. To help plan effective inservice programs to meet your needs, we are interested in your opinions about the planning and delivery of such programs:

1. What is the best time of year for inservice programs?
Please try to rank order the following choices using 1-5 so that "1" is the best time of year and "5" is the worst. Please try to use all 5 categories.

__________shortly after school is out in June

__________just prior to the start of the school year

__________during the school year - Sept. - Dec.

__________during the school year - Jan. - March

__________during the school year - April - June

2. What is the best time of the week for inservice programs?
Please rank 1-4 so that "1" is the best time and "4" is the worst.

__________during the school day

__________immediately following dismissal

__________weekday evening

__________weekend

3. Which of the following presentation formats for inservice training in learning disabilities would you prefer? Please rank 1-5 with "1" the most preferred category.

___________one hour

__________half day

__________full day

_________ two full days

__________weekend

4. Who should be included in planning inservice programs on learning disabilities? Please rank 1-5 so that "1" is the most preferred category.

__________school psychologist

__________teachers and administrators together

__________administrators

__________outside consultant

__________teachers alone

__________any combination of the above, please specify ______________________________

5. Which of the following presentation techniques for inservice training in learning disabilities would you prefer? Please rank your four top choices from 1-4 with "1" the most preferred category.

__________informal discussion with consultant

__________formal presentation by consultant

__________consultation on a one-to-one basis

__________workshop format with information presented and followed by participant practice

__________integrated series of workshops

__________observation of other teachers

__________sharing session with other teachers

__________other, please specify ______________________________

6. What reasons would encourage you to want to attend an inservice program in learning disabilities: Please rank 1-6 with "1" being the most preferred reason.

__________interest in theoretical issues about learning disabilities

__________to become acquainted with the latest developments in the field of learning disabilities

__________to obtain information and materials to use in present teaching assignments

__________to obtain information that will be used to effect change in classroom behavior/or instruction

__________to enjoy a mentally stimulating break from routine

__________to associate with adults and exhange information with colleagues

7. What incentives for inservice training would be most likely to encourage attendance at an inservice program? (circle one for each)

	not very likely		50/50 chance		likely
a. release time	1	2	3	4	5
b. fees paid	1	2	3	4	5
c. free material	1	2	3	4	5
d. college credit	1	2	3	4	5
e. salary increments	1	2	3	4	5
f. no incentives	1	2	3	4	5
g. other (please specify)	1	2	3	4	5

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C. To help us determine the content of inservice programs in learning disabilities, the following sections request that you estimate your current level of knowledge in the field of learning disabilities in the areas of general information, assessment and instruction/remediation and to indicate topics of interest to you for inservice training.

1) **Learning Disabilities: General Information**
Please rate your current level of knowledge in the following areas by circling a number from 1 to 5:

1	2	3	4	5
feel secure and competent to demonstrate to others		competent		feel insecure or not trained in this area

Definition	1 2 3 4 5	Social Skills	1 2 3 4 5
Characteristics	1 2 3 4 5	Self Esteem	1 2 3 4 5
Methods of identification	1 2 3 4 5	Behavior Management	1 2 3 4 5
Intelligence	1 2 3 4 5	Computer-Assisted Learning	1 2 3 4 5
Thinking and Problem Solving	1 2 3 4 5	Study Skills	1 2 3 4 5
Metacognition	1 2 3 4 5	Neuropsychology	1 2 3 4 5
Learning Strategies	1 2 3 4 5	Career/Vocational	1 2 3 4 5
Attention Problems	1 2 3 4 5	Communicating with Parents	1 2 3 4 5
Memory	1 2 3 4 5	Communicating with other Teachers	1 2 3 4 5
		Integration of students	1 2 3 4 5

Please select five of the above general information topics which would be of most interest to you in an inservice program. Please list them from 1 to 5 with 1 being the most preferred topic:

1.____________________________

2.____________________________

3.____________________________

4.____________________________

5.____________________________

Feel free to comment on special concerns or interests you would like addressed.

2) **Learning Disabilities: Assessment**
Please rate your current level of knowledge in the following areas by circling a number from 1 to 5:

1	2	3	4	5
feel secure and competent to demonstrate to others		competent		feel insecure or not trained in this area

Screening procedures	1 2 3 4 5	Assessment of Mathematics	1 2 3 4 5
Assessment of Oral Language	1 2 3 4 5	Assessment of Attention Problems	1 2 3 4 5
Assessment of Reading	1 2 3 4 5	Assessment of Intelligence	1 2 3 4 5
Assessment of Written Expression	1 2 3 4 5	Assessment of Social Skills	1 2 3 4 5
Assessment of Spelling	1 2 3 4 5	Assessment of Study Skills	1 2 3 4 5
Assessment of Handwriting	1 2 3 4 5		

Please select five of the above assessment areas which would be of most interest to you in an inservice program. Please list them for 1 to 5 with 1 being the most preferred topic:

1.______________________________

2.______________________________

3.______________________________

4.______________________________

5.______________________________

Please feel free to comment on special concerns or interests you would like addressed.

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3) Learning Disabilities: Instruction/Remediation

Please rate your current level of knowledge in the following areas by circling a number from 1 to 5:

1	2	3	4	5
feel secure and competent to demonstrate to others		competent		feel insecure or not trained in this area

Oral Language	1 2 3 4 5	Social Skills	1 2 3 4 5
Reading	1 2 3 4 5	Problem-solving/Thinking	1 2 3 4 5
Written Expression	1 2 3 4 5	Learning Strategies	1 2 3 4 5
Spelling	1 2 3 4 5	Behavior Management Strategies	1 2 3 4 5
Handwriting	1 2 3 4 5	Study Skills	1 2 3 4 5
Mathematics	1 2 3 4 5	Individualization of instruction	1 2 3 4 5
Attention	1 2 3 4 5	Developing individual education plans	1 2 3 4 5
		Integration of students	1 2 3 4 5

Please select five of the above instruction/remediation areas which would be of most interest to you in an inservice program. Please list them from 1 to 5 with 1 being the most preferred topic:

1.________________________

2.________________________

3.________________________

4.________________________

5.________________________

Please feel free to comment on special concerns or interests you would like addressed.

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Thank you for your assistance. PLEASE RETURN IN THE ENCLOSED ENVELOPE VIA INTERSCHOOL MAIL.